Medical Library Association

HANDBOOK OF

Medical library practice

with a bibliography

of the reference works and histories

in medicine and the allied sciences

Second edition, revised and enlarged

Janet Doe, Mary Louise Marshall

Editors

American Library Association

Chicago 1956

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Manufactured in the United States of America

Library of Congress catalog card number 55-6491

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Preface to the second edition

THE LITERATURE OF MEDICINE is probably more extensive and more complicated to follow than that of any other discipline. Those who read it—members of the medical and allied professions—and those who are responsible for its collection, care, and accessibility—medical librarians—all need guidance through its intricacies. This book is intended to make easier the task of the medical librarian in his labors on behalf of the medical worker

It is less true now than when the first edition of the *Handbook* was published twelve years ago that many libraries have to draw their staff from other than the medical library field, though that condition does frequently still exist. Medical library education has made strides in the last dozen years. Courses at four library schools—Atlanta, Chicago, Los Angeles, and New York—produce together several score of graduates each year Voluntary certification by the Medical Library Association is furnishing a standard and an incentive which are beginning to raise the general level of qualifications. The fact yet remains, however that many individuals do enter the medical field from that of general library work, and some still come from related medical occupations, though the latter number is growing less and less.

Whatever the origin of the medical librarian and regardless of his length of experience in the field, he will often need information on goals, on methods, on services, on bibliographic tools, on the historical aspects of his subject field. The newcomer will most frequently want to know what needs to be done and how to do it the seasoned librarian, better ways of gaining his end and new tools with which to work.

All of these various sorts of information will be found here what a medical library is and does the role of the Medical Library Association the training, qualifications and rewards of the medical librarian some of the important aspects of medical library administration and planning for a

new building Then there are the technical processes acquisition and preservation of medical books and periodicals medical classification systems descriptive and subject cataloging of medical books, differing in many ways from that for general literature the care of non-book materials, pamphlets and reprints, pictures, charts, maps, audio-visual adjuncts and sources and use of photoduplicated articles and books. Beyond this, one has the application of these processes for the desired results the medical library's public and internal relations reference and bibliographic work and the care and use of historical materials.

It is assumed that most of this *Handbook's* readers are already familiar with general library practices and tools. Emphasis has been placed on the differences that exist between them and those in medical libraries. Such variations are found in many aspects in the exclusively medical and scientific subject matter in the overwhelming importance of the periodical literature, in the volume of foreign publications, in a clientele with advanced educational background and urge to continuous reading for learning, teaching, and research purposes, and in the opportunities for historical and bibliographic studies by librarians. The newcomer will learn new points of view while the experienced worker may find fresh ideas.

Much of the data given here will be useful not only to librarians but to physicians and scientists. Guides to the devious channels of literary research should be welcomed by all who must explore them the student must be taught to find his way the practicing physician often wants help the research man has to keep himself abreast of his colleagues the teacher must be alert to new ideas. A knowledge of how to use medical library tools and of what services may be expected of the librarian should be vital to all of these.

To both physician and librarian, the extensive Bibliography contained in the *Handbook* should be of practical and constant value. In it are listed the chief reference works of medicine and its allied fields—first, those of science, then of medicine as a whole, and last, those of special subjects. Annotations indicate the characteristics and usefulness of each work. Here one can find the main avenues he should pursue for whatever particular inquiry he must make. For the historian, be he physician, scientist, or librarian, there is provided an even fuller record of the literature available to him, sources of information on medicine in every period country and specialty Anyone interested in the history of medicine will find this Bibliography exceedingly helpful in locating his material and in building his own historical reference collection.

While the early literature of medicine forms but a small part of the

average medical library its role is growing in importance. An attempt is made here, therefore, to show in a practical way the aims, methods and tools through which may be obtained the maximum use of this portion of the collection. A brief list of reference works most necessary for the history section of a small medical library is given.

It was because all of the information outlined above was either widely dispersed, inadequately covered, or nonexistent that this *Handbook* first came into being. Its inception was due to the initiative and unselfishness of a medical librarian, M. Irene Jones, who had herself felt the need of such a manual. Having compiled data for her own use, she freely turned over her manuscript to a committee of the Medical Library Association in order that the book might reflect the observations and procedures of many libraries instead of a single one. From that committee came the first edition of the *Handbook* in 1943.

In revising it for this second edition, every effort has been made to profit from lessons learned through the first edition. Comments, generously given and gratefully received, have been heeded as far as was practicable. The basic purpose, of course, remains the same as before to present as simply as possible information useful to those who deal with medical literature, whether librarians, physicians, scientists, or students. As previously the needs of the majority of medical libraries have been borne in mind. A count of those listed in the *American Medical Directory* for 1950 shows the following distribution by size

Number of Volumes	Number of Libraries
Under 2,000	76
2,000 to 4,999	75
5,000 to 9,999	72
10,000 to 19,999	50
20,000 to 49,999	61
50,000 to 99,999	22
100,000 and over	13
	369

Since three quarters of these libraries have under 20,000 volumes, collections of this size continue to be those for which this book is primarily intended. More attention has been given to the needs of libraries in the allied fields of dentistry pharmacy and nursing than in the first edition.

Material carried over from the first edition has been brought up to

date. A good deal of it has been rearranged. The type of information previously given in the chapter "The Medical Library" has been expanded into three chapters "Medical Libraries," "The Medical Librarian," and "Administration." The former two chapters, "Cataloging" and "Subject Headings," have been combined into one. The previous two lists of reference works, general and historical, have been amalgamated into a single comprehensive Bibliography. Three new chapters have been added: "The Medical Library Association," "Photoduplication," and "Public Relations," and new sections on book preservation and other subjects. To provide room for this augmentation the list of medical libraries abroad has been omitted and the writing throughout has been condensed wherever possible. Entries no longer useful have been dropped from the reference lists.

In spite of the fact that much material is new, the book rests solidly on the labor of the original authors. Judith Wallen Hunt has, unfortunately for the *Handbook*, left the medical library field, but her former chapter on "The Medical Library" supplies much of the data for several of the new chapters. Bertha B. Hallam, who has long been active in the Medical Library Association, has written the new chapter on the Association, while her former chapter forms the basis for "Acquisition and Preservation," by Isabelle T. Anderson. Similarly Miss Anderson's previous work on subject headings combined with that on cataloging by L. Marguerite Prime (whose presidential duties unfortunately prevented her taking on the additional burden of writing for the *Handbook* at the time it was begun) furnished the groundwork on which Wilma Troxel has built the chapter on these joint topics. Irene Jones has taken full responsibility for the chapter on classification, a responsibility formerly carried by her and Mary Louise Marshall, thus releasing the latter to serve as joint editor. The sad loss by death of Lillia M. D. Trask has necessitated the completion by Eleanor Fair of the revision of the chapter on non-book materials on which they had previously collaborated.

There are changes, too, besides the major ones of content. Difference in format was necessitated by the doubling in length of the Bibliography. The latter, the annotated list of 1965 reference works, should not be confused with the lists of References accompanying each chapter. The form of abbreviations for periodical citations follows that of the *World list of scientific periodicals*. This was chosen because the literature of medicine is a world literature with many possibilities for the confusion of similar titles. It seemed best, therefore, to adopt abbreviations of sufficient clarity to be understood by all.

The extent of the Bibliography and the large number of entries on a

two-column page, made it advisable in the index to refer to these entries by item number rather than by page. All other matter is referred to in the index by page number To distinguish between the two methods of numbering, item numbers have been printed in boldface, page numbers in roman.

It is inescapable, in a book whose parts are written by several individuals, that there will be varying opinions expressed, some of them occasionally diametrically opposed. The reader is warned that in such cases he must follow his own best judgment. Further he should be aware that the various chapters were not all completed simultaneously Those which were written early will necessarily not cover information as recent as those finished late. Allowances should therefore be made for such discrepancies.

The death of Marion F Dondale, author of Chapter 1 and a Past President of the Medical Library Association, just as this manuscript was finished, has brought sorrow to her colleagues and deprived the *Handbook* editors of her energetic and sympathetic support.

We thank Alice D Weaver Rare Book Department Head, New York Academy of Medicine, for checking the citations in Chapter 12. We are grateful to Erna Russo, head of the Catalogue Department, for careful supervision of the entry forms for references throughout the volume. The index is the combined work of Florence L. Duvall and Ellen Kerney both former library staff members of the New York Academy of Medicine, to whom go our thanks. Ilse Bry Library Associate in charge of the Neuropsychiatric Library New York University—Bellevue Medical Center very kindly checked for accuracy all reference numbers in the text with their entries in the chapter bibliographies. Helen Wasil Petrach, Secretary to the Academy's Librarian, has patiently and cheerfully assisted in reading the entire proof.

As was true of the first edition, the present *Handbook* records its debt to those institutions whose librarians have shared the labor of this volume. Even though the main work was done outside of "library time, the stress and strain of emergencies and extra tasks make the contribution of these libraries to the undertaking a very real one indeed. It is with a deep sense of gratitude that we acknowledge such participation on the part of the libraries of the following institutions Albany Medical College Emory University School of Medicine Louisiana State University School of Medicine Metropolitan Life Insurance Company New York Academy of Medicine Tulane University of Louisiana School of Medicine U S. Armed Forces Medical Library University of Alabama Medical Center University of Illinois, Chicago Professional Colleges University of Oregon Medical

School University of Rochester School of Medicine and Dentistry University of Tennessee College of Medicine University of Utah College of Medicine Vanderbilt University School of Medicine.

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EDITORS

August 4 1955

A series of unfortunate circumstances has delayed the preparation and publication of this *Handbook* In all but few instances, the material dates from October 1953 or earlier

Contents

chapter 1

Medical libraries

MARION F DONDALE

Late Librarian Albany Medical College Albany N Y

The literature of medicine and early libraries

THE LITERATURE OF MEDICINE is vital to the advance of medicine. Few medical discoveries have appeared like Athena, full-panoplied from the head of some medical scientist Most have been the result of communication of ideas and observations of innumerable men by means of the written literature. Nor is the recent literature sufficient, for many of the latest advances have evolved from the rediscovery in the older literature of ideas which contemporaries had overlooked or refused to accept. In our own day Alexander Fleming reported the discovery of penicillin only to have it lie dormant for ten years, possibly because chemotherapy was in disrepute. Chemicals which killed germs had also killed men. It is often said that medicine was retarded for a thousand years until men dared to challenge the teaching of Galen and return to that of Hippocrates. Theodoric (11) taught at the end of the thirteenth century that pus was not "laudable" but that wounds should heal by first intention. Yet "laudable pus was produced by surgeons, with few exceptions, for six more centuries. Treating wounds as Theodoric had recommended made possible the remarkable record of surgeons in World War II No one can estimate the number of lives and limbs lost and the amount of deformity produced through the centuries by disregard of the old literature. Cushing is credited with having introduced in 1918 the method of forcing bloody matter out of the brain through a skull wound at the time of debridement by having the patient strain while holding his breath, yet Theodoric, under similar circumstances, had said, "Let the patient hold his nostrils and mouth closed and have him blow strongly" Theodoric also anticipated Dandy in warning against the use of sedatives in head injuries.

The literature of medicine is vital, too, to the professional careers of its practitioners. The medical school graduate has learned the rudiments of the science but must always remain a student, for the practice of medicine requires constant reading. In a carefully regulated hospital, the record of every patient who dies is reviewed by the doctors of the staff and every conscientious physician secures all the help he can from his colleagues and from the literature in his effort to save or prolong his patients lives. The Council on Medical Education and Hospitals of the American Medical Association has quoted, in successive revisions of its suggestions for hospital medical libraries (5) an excerpt from an address by Dr George E. Vincent on the occasion of the celebration of the fiftieth anniversary of the Boston Medical Library. Dr Vincent said that without recourse to the literature "avoidable mistakes, waste and duplication of effort are inevitable. Doctors become victims of empiricism and routine imagination and initiative lack stimulus enthusiasm and energy decline minds grow sterile that under the quickening influence of the recorded experience of others might have been fruitful. The knowledge of medicine is so vast that no man can master it all, nor can he assemble in his private library all that he may need. The result in medical practice has been specialization in medical libraries, a *phenomenal growth, especially in hospitals and medical societies.*

Medical texts have been found in every ancient library uncovered by archeologists. The Edwin Smith surgical papyrus (1600 B.C.) is obviously a compilation of earlier texts, for the compiler explains the meaning of words already obsolete (17). The contents of medical libraries of ancient and medieval times can be envisaged by reading Cecilia C. Mettler's history of medicine (19). Mettler arranged her history by subject, and in individual fields has traced its development in each of the countries of the ancient world and through succeeding centuries by reference to the written literature, from which she has quoted generously. Through the pages of this book the reader moves along the shelves of a well-classified library reading the names of the authors and titles of the books which a library of any given century might have contained, with the added pleasure of being able to take one from the shelves and read a bit without the labor of translation.

Little is known of the contents and size of early libraries, but the volume of literature contained in them was so great by the sixteenth century that the need for some means of finding what one wanted became apparent. Bibliographies of medicine prepared in this and each succeeding century reveal the contents of the libraries to which their compilers had access. By the sixteenth century medical books in Italian, French, and German were appearing in comparatively large numbers, and by the eighteenth, proceed

ings of societies, the earliest form of periodical literature, were being published. Lynn Thorndike (25) has made a detailed analysis of à Beughem's bibliography of 1681 which shows the wide range of medical subjects covered by books of the period. There is even a complaint that "too many books are printed, confusing and burdening the mind more than they instruct it." (24) That the bibliography prepared by Adolph Carl Peter Callisen between 1830 and 1845 reached 33 volumes, although Callisen limited his work to the literature of slightly more than the preceding fifty years, is an indication of the tremendous output of medical literature in the beginning of the nineteenth century Three volumes were devoted entirely to the periodical literature, including not only articles from medical journals but those of medical interest in general and scientific periodicals. At the beginning of the *Index-Catalogue of the Library of the Surgeon General's Office United States Army* 400,000 subject cards were on file, while at the time of its discontinuance an accumulation of 1,750,000 unpublished references were left.

Physicians from early times were among the learned classes of society and beginning with Aristotle, we know that many gathered private libraries. Much of our knowledge of physicians libraries is derived only from sales catalogs, but other such collections are extant in the libraries of institutions, where they may be seen today William J Bishop (9) has described the notable libraries of two physicians of Cologne, and he and John L. Thornton (26–27) have discussed the extent of the collections of medical men, particularly in England. The owners of private libraries in Italy seem to have been among the first to bequeath or give their collections to institutions. Giancarlo Guidi (15) lists many private libraries from the thirteenth century to the present day One of the earliest medical libraries in the American colonies was that of John Winthrop son of the first Governor of the Massachusetts Bay Colony Winthrop made a collection remarkable for the period of about a thousand scientific and medical books, many of which went to the library of the New York Hospital in 1812 and eventually to the New York Academy of Medicine. The earliest libraries in Virginia were very small, one of the largest being that of Dr Henry Willoughby which in 1677 consisted of 44 books of "Phisick valued at 631 pounds of tobacco. Wyndham B Blanton (10) has listed authors and titles of the books in several libraries as given in old inventories of estates. Other American libraries have been studied by Keys (16)

It was to be expected that the libraries of physicians in the earlier centuries would contain many incunabula, but approximately from the time of Hunter these collections seem to have taken on a special character and may be described as collectors libraries. Their contents are the treasures

The literature of medicine is vital, too, to the professional careers of its practitioners. The medical school graduate has learned the rudiments of the science but must always remain a student for the practice of medicine requires constant reading. In a carefully regulated hospital, the record of every patient who dies is reviewed by the doctors of the staff and every conscientious physician secures all the help he can from his colleagues and from the literature in his effort to save or prolong his patients lives. The Council on Medical Education and Hospitals of the American Medical Association has quoted in successive revisions of its suggestions for hospital medical libraries (5) an excerpt from an address by Dr George E. Vincent on the occasion of the celebration of the fiftieth anniversary of the Boston Medical Library. Dr Vincent said that without recourse to the literature "avoidable mistakes, waste and duplication of effort are inevitable. Doctors become victims of empiricism and routine imagination and initiative lack stimulus enthusiasm and energy decline minds grow sterile that under the quickening influence of the recorded experience of others might have been fruitful." The knowledge of medicine is so vast that no man can master it all nor can he assemble in his private library all that he may need. The result in medical practice has been specialization in medical libraries, a phenomenal growth, especially in hospitals and medical societies.

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enlightening paper by C. D. Spivak (22). In 1898 there were 165 medical colleges in the United States, of which only 24 had libraries. There were medical libraries in 24 hospitals, in six schools of pharmacy, in one school of veterinary medicine, and in at least five state and local boards of health. Twenty-four medical societies had libraries, and there were medical departments in 45 public libraries. Spivak proposed that there should be one medical library in each city and commended Boston, where the medical schools had all given their libraries to the Boston Medical Library. Similarly the New York Hospital had given its collection to the New York Academy of Medicine, and the Albany Medical College had contributed its library to form the nucleus of the New York State Medical Library. The donors were later severely criticized for these altruistic deeds, and all eventually found it necessary to re-establish their own libraries. Growth of population and changes in teaching methods made it impossible to rely on one library in a city, especially if that library was not under the control of the teaching institution. Spivak concluded his paper with the terse statement that there was no profession with so large and voluminous a literature, and none in which its care was so neglected.

As early as the end of the eighteenth century growth of the literature, which had made it impossible for anyone to find material in the masses collected in libraries, led to the preparation of bibliographies, which in turn, by bringing order out of chaos, encouraged the growth of libraries. Including only those which have survived to the present time, the accompanying table shows this growth in the United States and Canada.

Medical libraries established in the United States and Canada to 1950

Year	Number of Libraries	Year	Number of Libraries
T 1800	6	1900–1909	44
1800–1849	28	1910–1919	54
1850–1859	8	1920–1929	63
1860–1869	5	1930–1939	59
1870–1879	14	1940–1949	34
1880–1889	12	No date given	6
1890–1899	36		

Compiled from information in *American medical directory* 1950.

Types of libraries

On the basis of affiliation, medical libraries may be classified as government, school, society, hospital, and industrial research libraries. Subject content, size, and to some extent the methods of these libraries are determined by their affiliation, and therefore show wide variation to meet the

needs of their clientele. Some are reference libraries with so wide a scope that they closely resemble general public or university libraries, while others limit their content to a single branch of medicine or to the needs of a single group.

The outstanding government medical library in the United States is the Armed Forces Medical Library. While its first responsibility is to the Armed Forces, a recent directive declared that it "shall serve . . . as a National Library for medicine and related sciences. In carrying out this *objective, it will be dedicated to the advancement of medical sciences in* the United States as a whole, as well as within the Department of Defense." The largest medical library in the country, it is also one of the largest in the world, and through its special services, notably the publication of its *Index-Catalogue* and its *Current List of Medical Literature* has achieved world-wide fame. It is a general medical library with a wide clientele and many outgoing interlibrary loans. The Library provides photoduplication service at cost; during 1952 it photographed 2,000,000 pages in response to 88,000 requests. Some idea of the volume of requests from non-military sources can be derived from the report that at fifty cents for five consecutive pages of photostatic reproduction, or for fifty consecutive pages of microfilm, the library collected $20,000 in 1952 from non-military users.

The federal government also maintains medical libraries under the direction of the Public Health Service, such as those of the National Institutes of Health, which are chiefly concerned with research in public health and preventive medicine. Under the control of the Atomic Energy Commission are special libraries in the United States and abroad to aid research in the effects of nuclear radiation and the application of atomic energy *to medicine. The Veterans Administration maintains medical* libraries as well as patients' libraries in all of its hospitals, of which there are approximately 170. Their librarians may have to care for both kinds of libraries. They are usually given special training in medical library work so that they can serve the professional staff as well as patients adequately. The larger hospitals have a medical librarian as well as a chief librarian. These libraries are small and serve only the hospital staff, as do the working collections maintained in army and naval hospitals.

Some states, such as New York and Iowa, have medical libraries which cover all the sciences related to medicine. They are reference libraries but have a large extension service for physicians, dentists, nurses, and teachers within the state. Through interlibrary loans to public and other general libraries they serve many non medical readers. State health departments frequently have libraries which are usually limited in content to public health and preventive medicine and in clientele to the members of the

department. There are also a few medical libraries which are branches or departments of city public libraries. In some cases these are cooperative projects in which the local physicians or medical society provide the books and journals and the public library provides space and some service.

The library staff in most of these government libraries is under civil service and enjoys its advantages tenure, regular salary increments within grades, retirement plans, and hours of service resembling those of business organizations. Disadvantages lie in much shorter vacation periods, large amounts of paper work, and delays and restrictions in various procedures because of general regulations.

School libraries serve primarily the teaching center of which they are a part, its faculty students, technicians, and the administrative, medical, and nursing staffs of its affiliated hospitals. In universities they may be combined libraries serving medical, dental, and nursing schools and schools of pharmacy the most frequent combination being medicine and nursing. A state supported medical school may perform the function of a state library as in Wisconsin and a large school library such as Tulane or Vanderbilt, may assume the same function in an area which has few medical libraries. Because students, who form the larger part of the clientele, should acquire as much independence in the use of the library as possible, stacks are usually open. This is the only type of medical library which is likely to have a reserve collection for books in great demand or for assigned reading. If the library of a university medical school is on the campus of the university many of its technical services may be performed by a central department in the university library For staff members engaged in research longer loans than usual may be permitted, and books may to some extent be decentralized in departmental libraries. The school library usually is open longer hours than other types of medical libraries, so that the staff schedule more nearly resembles that of the university or the city public library

The concept of a medical school library as a teaching rather than a service department is growing, especially in the university schools. In many of these the professional members of the library staff have been given faculty standing. Regardless of faculty rank, the librarian's work usually includes instruction in the use of the library and in medical bibliography often by formal courses. Although the schools are nonprofit institutions dependent chiefly upon income from endowment funds and with standards which must be maintained regardless of cost most have provided retirement plans for the library staff and many have tenure. Salaries on the whole compare favorably with those in most other types of medical libraries, but greater freedom in the arrangement of hours of work, sick

leave, and vacation schedules, and the atmosphere of an educational institution more than compensate many librarians for lower salaries than some other types offer

Society libraries are supported by associations of physicians. Among these are several of the largest libraries, such as those of the Royal Society of Medicine in London, the College of Physicians of Philadelphia, the New York Academy of Medicine, and the Boston Medical Library The larger libraries have other means of support than membership dues, for instance, income from endowment, and have attracted many gifts of rare books, special funds for the acquisition of incunabula, and bequests of money and books. They have a much wider coverage than any others. They serve a wide variety of readers in addition to their members and are of inestimable aid to smaller libraries, to which they make generous interlibrary loans. Since they are principally reference libraries, their loan periods are usually short and may be restricted to members, and interlibrary loans may be restricted to those at a distance. The librarians of these libraries are and have been scholars who contribute books and papers to the literature of medicine and medical bibliography They with three or four of the large medical school libraries, have been the training ground for many medical librarians.

The libraries of the American Medical Association, the American College of Surgeons, and the American Dental Association maintain large reprint and pamphlet collections rather than large numbers of bound volumes. Individuals who write directly to one of those libraries for literature on any subject receive a package library" of reprints. The library of the American College of Surgeons translates articles from foreign languages and prepares abstracts for its members for a fee. These services are particularly valuable to the doctor who lives far from the urban centers where most medical libraries are found

Ranging from the smallest libraries to some of moderate size are the society libraries established by smaller groups of physicians and the county medical societies which are the smallest units of the American Medical Association. As mentioned previously some of these are conducted in cooperation with public libraries. Some society libraries both in the British Commonwealth and in the United States have merged with or are housed in a college or university medical library Wherever doctors and dentists concentrate their offices in a "medical arts building, the library usually occupies part of the building

Hospital libraries are usually small working collections, including the latest editions of textbooks and a selection of journals covering the last five years. The size of the hospital, the availability of other library resources,

and the fields of medicine with which the hospital is concerned determine the choice and number of periodicals. In the smaller hospitals the libraries may not be organized and may be in the care of the head of the record room, and the librarian may also be responsible for a patients library Large teaching hospitals with resident staffs, on the other hand, maintain correspondingly large libraries, especially if the schools with which they are affiliated are at a distance. Group clinic libraries vary from small working collections provided by the doctors themselves to extensive libraries for research as in the Mayo Clinic.

Certain industrial firms have established medical libraries to serve their research departments. These are chiefly pharmaceutical companies, but some industries closely related to medicine and some insurance companies also maintain medical libraries Each library is restricted in the number of subject fields covered, but has thorough coverage in those fields. Current issues of periodicals, instead of being kept in the library or lent for not longer than overnight as is their usual treatment, are commonly routed immediately through the laboratories or offices, or their tables of contents are reproduced and circulated, so that those engaged in investigation may learn at the earliest possible moment of articles important to their study More indexing and abstracting of current articles is done than in most medical libraries. The library staff enjoys most of the benefits of industrial organization—high salaries, retirement plans, and regular business hours—but also suffers the disadvantages of regimentation and shorter vacations. Prolonged labor disputes may create a number of administrative and personnel problems for the librarian.

In society school, hospital, and company libraries the librarian s work may include the editing or assistance with the editing of publications. In company libraries this sometimes includes the preparation of many abstracts. A number of the public health libraries also prepare bibliographies in subjects of interest to local laboratories and health officers which they distribute to all connected with the state health organization. One state health department library supplies not only lists but books and reprints to any organization desiring them, such as mental hygiene societies, parent teacher organizations, and study clubs, as a means of stimulating interest in public health problems. The librarians of all types of libraries may assist staff members in the preparation of scientific papers, both by editing the papers and by preparing and checking bibliographic references.

Differences between medical and general libraries

Differences between medical and general libraries are chiefly due to differences in clientele and subject content. Medical libraries are developed

primarily for the use of the professions of medicine, dentistry pharmacy nursing, and veterinary medicine, and of those in allied sciences and in auxiliary fields such as physical and occupational therapy medical social work, laboratory technology and dietetics. Many other groups, such as lawyers, business men, and teachers, consult medical libraries on occasion, but they form a small minority of its patrons. Thus the clientele is a more homogeneous group than that of even a university library The education of most users is far above that of the clientele of a public library for most will be college graduates and many will hold advanced academic degrees in addition to their professional degrees. The subject content is predominantly medicine, but material in the related fields is constantly increasing, and as a library attempts complete coverage its contents come more nearly to resemble those of a general library Biology and chemistry have long been closely related physics has become of greater significance in recent years, as substances produced by atomic fission are applied in the diagnosis and treatment of disease psychology has become vastly more important and sociology and anthropology must be included, as it is realized that disease cannot be treated as a phenomenon apart from the patient and his environment. The medical library is distinct from both the public and the university library in that it contains no fiction or general literature, unless as a sort of *hors d'oeuvre* it collects such works by or about medical men.

Periodicals predominate over books in medical libraries, for they are of first importance in medicine. They carry reports of advances in the study of disease, of new methods of diagnosis and treatment, and of the use of drugs, either successful or unsuccessful. Such reports are of the utmost importance, and publication in periodicals enables them to reach the practicing physician and others engaged in research at the earliest possible moment The final results of some of these studies appear later in book form, and may eventually be incorporated in text and reference books, but the earliest reports appear in the periodicals. Since it is frequently desirable to consult the exact statement of the author and since many reports will not be published in any other form it is necessary to preserve them carefully Therefore periodicals are regularly bound and all but the smallest libraries secure and maintain as nearly complete files as possible. In addition to periodicals, many medical libraries have need of documents—the official publications of local state, and national governments—concerning health and medicine such as public health laws, sanitary codes, interstate and international commerce and travel regulations, court decisions on specific cases involving these rules, and official reports of governmental health agencies Reports of institutions and congresses will be preserved in many libraries. Pamphlets and reprints provide additional reference

material, especially for the small library which can thereby increase its coverage. Announcements of new drugs from pharmaceutical firms are often of value, at least until reports of their use have appeared in journals.

Budget and space requirements are proportionately greater in a medical library than in a general library Since medical books are usually heavily illustrated and since their market is limited, their cost is high. One modern textbook sells for $23, and a recent edition of another is published in four volumes at $18 each. One periodical subscription may be $100 a year one abstract journal costs $250 a year To purchase these materials the medical library must have a much larger budget than a general library of the same size. In addition, only an average of five or five and one-half medical books and bound periodicals can be accommodated in one foot of shelf space, compared with eight volumes of fiction. Many periodicals grow at the rate of one foot a year and the larger libraries regularly receive between 1500 and 2500 titles. Material may not be discarded so frequently in order to release shelf space as in general libraries, because constant reference must be made to the older literature. Even that not consulted for years may be wanted at any time, and, by some perversity the surest way to create a demand today is to have disposed of the material yesterday The growth of a few medical libraries is shown in the accompanying table.

Growth in volumes of selected medical libraries, 1898–1953

Library	1898	1931	1940	1950	1953
University of Colorado		18,000	25,750	36,600	47 113
University of Illinois	2,025	38,715	51,104	85,000	103,597
University of Wisconsin		19,102	28,000	40,000	49,000
Columbia University		50,000	100,000	140,000	175,000
Emory University		14,500	18,155	30,570	41,540
Marquette University		5,000	12,020	20,226	46,845
Tulane University	3,500	18,750	33 400	47,500	56,175
Vanderbilt University		25,000	43,500	51,387	56,803
Orleans Parish Medical Society	2,395	16,150	24,000	29,700	31,031
Ramsey County Medical Society	2,000	5,000	20,063	29,210	30,833
Medical Society of the County of Kings	14,000	121,738	146,691	167,083	183,000
New York Academy of Medicine	50,000	169,000	231,843	256,000	289,000

Sources Spivak (22) p 854 *American medical directory* 1931 1940, 1950- personal communications.

One of the difficulties of medical library work is the vocabulary of science. To the ordinary person with a good education much of the language of science is as unfamiliar as Greek indeed, much of it is derived from Greek. There is little of the simple Anglo-Saxon in the vocabulary of medicine, and the medical librarian must acquire familiarity with that vocabulary in fact, he may be called upon occasionally to add to it. The

ideal time to acquire this familiarity is during his basic education, but, if this has not been possible, it must be learned gradually by persistent self education through reading and constant use of dictionaries, or by special courses. Several helpful articles and books are available (1 6, 7 8, 21)

Although English is possibly becoming the language of science, all but the smallest medical libraries have some material in other languages, at the least French and German. The medical librarian s task is frequently not merely to provide a book or journal in a foreign language, but to determine whether or not it contains pertinent information. As the library increases in size or degree of specialization, so does the diversity of tongues. Staff members must then be added who can catalog, translate and abstract material in these languages, and who can deal with the scientific terminology

The importance of the periodical literature creates a variety of special problems in all departments of the medical library Since publishers usually print only slightly more than the number of copies required for their subscribers, the receipt of each issue must be noted carefully and issues not received must be claimed promptly For this reason, too, discontinuing subscriptions in a lean year is inadvisable. Single issues must be recalled from borrowers early since they are easily lost. Lost issues are usually the most valuable ones, and in any case must be replaced in order to maintain complete volumes. The extent of use and the available space will determine whether duplicates are to be kept and how many An added tax on the budget is the possibility that more than one subscription may be needed for a single title. There seems never to be a convenient time for binding delay in binding increases the danger of loss or damage to single issues, prompt binding deprives readers of current papers. An index to each volume is extremely important, but is sometimes published separately The size of the library and the way it is used will also determine how nearly complete the run of back volumes should be. Although substitution of one paper for another is rarely possible, a recent textbook or a review article may provide a quick review of a subject. All papers on a particular subject may be requested, but more frequently the call is for a particular paper by a certain author for each usually contains a special nugget of information unique in that paper This must be found, no matter how vague the request may be in terms of the author s name or the date. For instance, the request may be for some paper which the reader saw in the past two or three months while browsing among the new journals.

Library standards

The medical schools of the United States were far slower than those of Europe in adopting the laboratory method of teaching in the basic sciences

and the study of disease at the bedside, with its increased dependence upon libraries. As late as 1910 in most medical schools students were taught through lectures and reading in an assigned textbook. Abraham Flexner whose survey of medical education for the Carnegie Foundation for the Advancement of Teaching was published in that year (13) commended only three schools for their good libraries. A few schools were reported to have small working collections, but no funds for the purchase of books. One university school had a large library in a building separate from the school which was open only two hours a day and was unheated when visited by Flexner in midwinter Three others had "limited accumulations of textbooks and cheap medical periodicals," housed behind a counter in the business office in one case and in a college clubhouse in another Some had no books, and in one a room marked "Library" proved to be a classroom with no books in sight. Flexner's report led to the establishment of standards for medical schools many which could not meet these standards or were unwilling to meet them closed, and those which remained were reformed. Since that time, increasing recognition has been given the medical library as an essential factor in medical education. A medical school may jeopardize its standing as well by an inadequate library as by inadequate instruction in obstetrics or any other essential subject in the curriculum. The report of a survey published in 1940 contains this statement "If a medical school were to be appraised by a single criterion, the library might well serve. The library reflects the scientific interest of the faculty and in the extent to which it is used by students it measures their interest in the study of medicine." (29 p. 88) In a more recent survey of medical schools the authors paraphrased Osler by saying, "To study medicine without books is to go to sea without a compass." (12, p. 181)

The American Medical Association's Council on Medical Education and Hospitals is the body which has graded medical schools and approved hospitals for internships, residencies and fellowships. For each it has published essentials on which its approval is based, including minimum library standards. The *Essentials of an acceptable medical school* first set forth in 1910, had undergone eight revisions by 1951 with steadily higher standards (3) The latest statement calls for a "trained librarian with experience in medical library work," the more modern reference books, serviceable card catalogs, the commonly used indexes, regular receipt of the leading medical periodicals, prompt binding of journals, and instruction of all students in use of the library The essentials for an approved internship (5) require that the hospital provide a library which shall be properly supervised" and make readily available current issues of representative medical journals covering the major clinical fields" in addition to a "useful

collection of recent editions of standard texts, monographs, and reference books." A large number of texts and journals is not required if other library resources are available, but these outside facilities are to be regarded as supplementary to and not a substitute for the hospital library. Hospitals seeking approval for residencies and fellowships should "maintain an adequate medical library containing carefully selected, authoritative medical textbooks and monographs of the latest edition," medical journals in the fields of medicine in which the residencies are conducted, and an index to the periodical literature. The Council has prepared and published at intervals of a few years suggestions for hospital libraries, including the minimum amount of money needed to establish a nucleus of reference material, annual expenditures, ways of providing this money, general organization of a library, a list of suggested periodicals and books from which selections may be made, and a list of publishers with their addresses. The latest issue appeared in 1951 (4). The American College of Surgeons has also established a minimum standard for the medical library of a general hospital, successive revisions of which have been published in its *Bulletin* (2). It recommends a library of at least one thousand volumes for a hospital of more than one hundred beds if dependent on its own resources to meet the needs of the staff. The College offers many valuable suggestions for furnishing the library and provides lists of periodicals and books. Both American Library Association and American College of Surgeons standards can be of immense help to the librarian of any small medical library. Since December 1952, standards for hospitals have been the responsibility of the newly established Joint Commission on Accreditation of Hospitals, composed of representatives from the American College of Physicians, the American College of Surgeons, the American Hospital Association, the American Medical Association, and the Canadian Medical Association.

The Medical Library Association has set minimum requirements for its institutional members. Medical or allied scientific libraries of not less than one thousand volumes of medical or allied scientific literature, *half of them published within ten years of the date of application for membership*, may join the Association. They must be open during regular hours with qualified attendants, and must receive regularly not less than 25 standard periodicals such as those included in the lists mentioned above or in the *Library handbook for schools of nursing* (20). These membership requirements scarcely deserve to be considered standards and various groups in the Association have felt the need of criteria by which they can judge their own libraries. The medical school librarians undertook to establish such criteria in 1947. Standards are extremely difficult to set because so many factors must be considered: the size of the student body, research activities,

distance from other larger libraries, relation to a university library Suggestive criteria have resulted from a survey of medical school libraries completed by the Medical Library Association and submitted to the Committee of the Council on Medical Education and the Association of American Medical Colleges as a supplement to their recent survey of the needs of the schools. In connection with this survey the Medical Library Association's committee prepared a list of books and periodicals desirable in a medical school library which will be revised at intervals. The librarians of the schools of pharmacy in the Association have worked toward the formulation of standards for their libraries, and the Library Committee of the American Association of Colleges of Pharmacy a joint committee of teaching faculty and librarians, is engaged in this task. The librarians of schools of dentistry are likewise working with the American Dental Association on standards. Standards for hospital medical, nursing school, and patients libraries, prepared by a joint committee from the American Library Association, the Special Libraries Association, and the Medical Library Association, were printed in 1953 by the American Library Association.

Distribution of libraries

From earliest times medical libraries have grown in centers of medical education and research throughout the world. Hospitals have been established centrifugally from these centers wherever the population and economic status of communities have become great enough to support them and medical libraries soon thereafter become necessary Comparison of existing facilities in different countries is somewhat futile because of the variety of factors involved area, population, wealth, living conditions, and opportunities for general education. Today it is recognized that the health of peoples and their social and economic development are interdependent Consequently nations are working together through the World Health Organization (WHO) and the United Nations Educational, Social, and Cultural Organization (UNESCO) to secure a more adequate distribution of medical facilities, including libraries, throughout the world.

The American Medical Association keeps up-to-date information concerning medical libraries in the United States and Canada and publishes it in the *American medical directory* normally revised biennially W R. LeFanu prepared a *List of medical libraries and information bureaux in the British Isles* in 1946 (18) but this is now out of date. Another out-of-date list of libraries throughout the world is that appearing in 1943 in the first edition of this *Handbook* Information on the size of libraries in other parts of the world is not only difficult to find but also difficult to interpret because of different methods of counting For example, a recent article on the State

Lenin Library (23) quoted from the Russian journal, *Bibliotekar* for January 1952, reveals that libraries in the Union of Soviet Socialist Republics include in their count of volumes books, single issues of periodicals, and annual volumes of newspapers.

Distribution of libraries in the United States and Canada has changed little since 1943. The largest libraries are found in the northeastern United

Medical Library Resources, 1950

Region	*Population*	*Physicians*	*Medical Schools*	*Medical Libraries*	*Volumes* 1940	1950
Northeast	44,946,802	74,170	25	168	2,588,241	3,867 488
Connecticut	2,007,280	3,275	1	7	100,934	261,862
Delaware	318,085	429	0	2	2,600	10,000
District of Columbia	802,178	2,464	3	8	491,762	900,280
Maine	913,774	973	0	2	2,000	2,500
Maryland	2,343,001	3,445	2	8	216,145	347,974
Massachusetts	4,690,514	8,688	3	24	353,436	423,093
New Hampshire	533,242	734	1	1	18,540	26,192
New Jersey	4,835,329	6,429	0	8	29,837	56,083
New York	14,830,192	30,212	9	68	938,201	1,257,215
Pennsylvania	10 498,012	14,207	6	26	377,579	428,431
Rhode Island	791,896	992	0	3	36,075	39,505
Vermont	377,747	569	1	1	11,500	12,789
West Virginia	2,005,552	1,753	1	2	9,632	11,564
	Volumes per physician, 52					
Midwest	39,957,577	49,668	17	86	1,320,389	1,751 439
Illinois	8,712,176	12,764	5	28	464,644	623,513
Indiana	3,934,224	4,307	1	9	58,800	94,006
Iowa	2,621,073	2,890	1	4	57,965	84,298
Michigan	6,371,766	6,937	2	9	149 492	185,658
Minnesota	2,982,483	4,117	1	9	158,510	203,777
Missouri	3,954,653	5,074	3	9	175 105	221,630
Ohio	7,946,627	9,883	3	15	193,813	257,531
Wisconsin	3,434,575	3,696	2	3	62,020	81,026
	Volumes per physician, 35					
Southeast	31,783,727	27,887	17	40	387,255	588,331
Alabama	3,061,743	2,192	1	3	15,631	32,883
Arkansas	1,909,511	1,665	1	1	12,368	20,186
Florida	2,771,305	3,025	0	3	9,250	22,250
Georgia	3,444,578	3,031	2	6	38,345	60,617
Kentucky	2,944,806	2,527	1	3	35,708	41,030
Louisiana	2,683,516	2,913	2	4	66,729	106,217
Mississippi	2,178,914	1 457	1	3	12,500	24,570
North Carolina	4,061,929	3,275	3*	5	54 498	83,192
South Carolina	2,117,027	1 476	1	2	13,601	20,230
Tennessee	3,291,718	3,113	3	6	71,229	98,956
Virginia	3,318,680	3,213	2	4	57 401	78,400
	Volumes per physician, 21					

Medical Library Resources, 1950—continued

Region	*Population*	*Physicians*	*Medical Schools*	*Medical Libraries*	*Volumes 1940*	*Volumes 1950*
Southwest	11,375,319	11,194	4	16	77,054	189 450
Arizona	749,537	802	0	3	2,125	10,306
New Mexico	681,187	504	0	1	150	4,500
Oklahoma	2,233,351	2,164	1	3	13,750	33,212
Texas	7,711,194	7,724	3	9	61,029	141,432
	Volumes per physician, 17					
Northwest	7,987,326	8,903	7	20	166,676	225,739
Colorado	1,325,089	2,185	1	4	65 408	76,011
Idaho	588,637	484	0			
Kansas	1,905,299	2,039	1	5	27,585	46,700
Montana	591,024	559	0	1	210	3,000
Nebraska	1,325,510	1,581	2	5	55,042	75,151
North Dakota	619,636	475	1	2	5,806	8,252
South Dakota	652,740	492	1	1	6,000	7 125
Utah	688,862	841	1	1	6,300	9,500
Wyoming	290,529	247	0	0		
	Volumes per physician, 25					
Far West	14,646,610	21,383	6	25	351,007	499,817
California	10,586,223	16,668	4	20	306,715	406,467
Nevada	160,083	199	0	0		
Oregon	1,521,341	1,802	1	1	26,721	43,000
Washington	2,378,963	2,714	1	4	17,571	50,350
	Volumes per physician, 23					
Canada	12,766,000	14,368	10	19	239,825	336,483
Alberta	846,000	852	1	2	7,000	12,468
British Columbia	1,082,000	1 451	0		8,400	11,080
Manitoba	757,000	803	1	1	12,189	16,093
New Brunswick	503,000	353	0	0		
Nova Scotia	635,000	582	1	1	14,014	17,273
Ontario	4,297,000	5,550	3	6	100,199	135,000
Quebec	3,792,000	4,102	3	7	101,824	144,560
Saskatchewan	854,000	645	1	0		
	Volumes per physician, 23					

Sources U ited States Census, 1950; *World almanac* 1951; *American medical directory* 1940, 1950. Population of Nova Scotia, Ontario, Quebec, and Saskatchewan is estimated as of 1948. An asterisk ( ) after a number indicates that a two-year basic science school is included in the total. Florida has organized one school since collection of these data and is in process of organizing another.

States, and the greatest concentration of libraries and literature is found there. The distribution of collections is very uneven. Fourteen of the states and two of Canada s most populous provinces have book stocks of less than fifteen volumes per physician, and in seven states and one province libraries contain less than ten volumes per physician. While this is much larger than

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Tennessee	3,291,718	3,113	3	6	71,229	98,956
Virginia	3,318,680	3,213	2	4	57 401	78,400
	Volumes per physician, 21					

1953, 3513 claimed medical libraries, few of which are large enough to meet the requirements for institutional membership in the Medical Library Association. Of four hundred federal government hospitals, 367 or 92 per cent, had medical libraries. The remainder have been classified as short-term (non-chronic disease) hospitals, general and special long-term hospitals, mental and allied disease hospitals, and tuberculosis hospitals. Of all these, the short-term hospitals comprised 82 per cent, and short-term hospitals of less than 50 beds, 33 per cent. Only 28 per cent of the latter had medical libraries, but the percentage of libraries increased in direct proportion to the number of beds in the hospital. Medical libraries were reported in 86 per cent of those having 100–249 beds, and in 98 per cent of those having 250 or more beds. The direct relation of size to educational activity and to the requirements for approval by the American College of Surgeons and the Council on Medical Education and Hospitals of the American Medical Association is clearly shown by these figures. Of the hospitals in the remaining three classes—general and special long-term, mental and allied diseases, and tuberculosis—39 71 and 55 per cent, respectively had medical libraries. Possibly these high percentages reflect the teaching and research activities of the institutions.

Nursing schools are most widely distributed and are the most numerous of all schools allied to medicine. They differ from the others in that the majority require no college work and grant diplomas rather than degrees. Of 893 such schools only 35 per cent have libraries of 1000 or more volumes, while nearly one third have less than 700 Of the 128 schools requiring some college work and granting degrees, 79 per cent have libraries of 1000 volumes. It is obvious from the foregoing that the literature of medicine and the allied disciplines is widely but unevenly distributed, and that collections need to be strengthened in those regions where they are still inadequate.

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chapter 2

The Medical Library Association

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Origin

THE MEDICAL LIBRARY ASSOCIATION was organized in 1898. From its inception, its progress and activities have been based on a high degree of cooperation and international endeavor (6) The records do not state who was definitely responsible for the establishment of the Association, but it is certain that Dr George M. Gould, Dr William Osler and Miss Margaret Charlton were instrumental in starting it on its way It seems probable that the founding initiative came through the wisdom and the spoken words of Miss Charlton (12) Librarian of McGill's Faculty of Medicine. It was she who sensed the value to be gained by an association of those interested both in reading and in promoting the use of medical literature (7–8, 27) And it was Dr William Browning who said in his presidential address (8) "The progress of one library helps all others."

The eight charter members who attended the organizational meeting of the new Association of Medical Librarians (4 7 17 25) in Philadelphia, May 2, 1898, formed a representative census of those influential in the medical libraries, medical education, and medical practice of the day Dr E. H. Brigham of Boston Dr *Browning of Brooklyn* Dr *Gould of* Philadelphia Dr John L. Rothrock of St. Paul Miss Charlton Mr Charles Perry Fisher Librarian of the College of Physicians of Philadelphia Miss Marcia C. Noyes, Librarian of the Medical and Chirurgical Faculty of Maryland, Baltimore and Miss Elizabeth Thies, Librarian of Johns Hopkins University Medical School. Dr Osler unable to be present, sent his regrets, as did a number of other physicians. Dr Gould was elected the first president, Dr Rothrock vice-president, Miss Charlton secretary and Dr Browning treasurer

Dr Gould read the first paper before the Association, "The work of an association of medical librarians." (14) His keynote was cooperative endeavor by the members, working through various committees on exchange of duplicate publications, on securing libraries of retiring or deceased physicians, on securing and distributing society transactions, on antiquarian books and auction sales, on securing endowments for libraries, on rare works in single libraries, on supplying special information and on library management and technics. That the cooperative efforts of the Association have proved successful has been stressed by more than one later president (9–10, 29)

Organization

The name Association of Medical Librarians was changed in 1907 to Medical Library Association,[1] and under this name it was incorporated on a nonprofit basis in 1934 (19) under the aegis of Miss Sue Biethan, Chairman of the Executive Committee, and of Miss Noyes, the Association's first woman president (17) Its affairs are regulated by a certificate of incorporation, replacing its previous constitution, and by by laws revised from time to time (24)

Association membership consists of five classes honorary sustaining, associate, institutional, and active. Honorary membership is bestowed on persons who have made outstanding contributions to the purposes of the Association. Associate members, with annual dues of five dollars, comprise that large group of physicians and interested individuals who have always aided the Association and to whom it owes much of its success. They often give active help and one of them serves as Honorary Vice President, a position of responsibility as well as honor Sustaining members, persons or organizations interested in medical or allied sciences, pay $100 dues. Institutional membership is open to medical and allied scientific libraries of not less than one thousand volumes, receiving regularly not less than 25 current periodicals and maintaining regular hours with qualified attendants. Their dues of $25 entitle them to a vote and to participation in the Association's Exchange. Active members, the rank and file actively engaged in library or bibliographic work in medical or allied scientific fields, pay five dollars and are entitled to a vote and to the Association's *Bulletin* at a reduced rate. Honorary sustaining, associate and institutional members receive the *Bulletin* without charge. Management of the Association's affairs rests with the Board of Directors, eleven in number six of whom are the elected officers president, vice-president

[1] The name American Medical Library Association had been suggested but was voted down because "the work undertaken by the Association was international in its scope." (6)

(president-elect) honorary vice-president, immediate past-president, secretary and treasurer

Widespread as is the membership, individuals have slight chance to consult with each other except by mail. This was the case even in 1898 when the Association was organized. For this reason, from the first, annual meetings have been held to promote acquaintance and exchange of ideas between the members, and to carry on Association business. Regularly except for the war years, these meetings, held by invitation in the North, South, East, and West of the United States and Canada, have stimulated a wide acquaintance among medical librarians and a wide knowledge of the medical libraries in North America. The programs are varied, devoted to the problems and interests of the divergent groups representing libraries of all sizes, types and subject matter. In recent years, regional meetings in the interim between annual meetings have filled a long-felt need of those who cannot attend annual meetings at distant points (30)

Program

Committees under the guidance of the Board of Directors accomplish most of the Association's work. A strong start was given to these by Dr Gould at the first meeting in 1898 (14) Their present extensive activity received impetus from the presidential initiative of Mr Charles Frankenberger in 1935 (13) which led to a widened scope for Association activities on the national and international level.

A primary object from the beginning has been the distribution of duplicate literature among members. The Association's Exchange, established in 1899 sent out 300 volumes its first year in 1953 its counted distribution amounted to 7029 bound volumes and 146,612 single issues. Under the supervision of the Exchange Committee, the Exchange Manager maintains a central office to which all institutional members wishing to participate send lists of their duplicate books and journals. To be eligible to receive material a library must offer such a list at least once every two years. These lists of offerings are broadcast to all library members, checked by them for material wanted, and returned to the Manager who assigns *the duplicates under regulations giving the fairest possible distribution* This service brings recipients immense amounts of material, often unavailable elsewhere at any price, the only expense being the cost of transportation. The Exchange is one of the bulwarks of the Association. Many individuals have contributed to its development, but it was under the guidance of Miss Ella B Lawrence that it grew to large proportions (1) A description of its past and present, its structure, its problems, and its value has been given by Mr James F Ballard (7)

The dissemination of information through publications is another important objective of the Association. Its official organ, the *Bulletin of the Medical Library Association* published quarterly has appeared under various titles

Medical Libraries (Association of Medical Librarians) Denver v.1-5 February 1898—December 1902. Official organ to 1901.

Bulletin of the Association of Medical Librarians, Baltimore, v.1, nos. 1-4, January—October 1902.

Medical Library and Historical Journal (Association of Medical Librarians) Brooklyn, v.1-5 January 1903—December 1907

Bulletin of the Medical Library Association, Baltimore, n.s. v.1 July 1911+

It has published articles on the literature of medicine, dentistry pharmacy nursing and allied scientific fields, as well as on their biography and history and on various phases of library work.

The *Directory of medical libraries belonging to the Medical Library Association* 1950 contains in addition to library data the Association's certificate of incorporation, by-laws, code for training and certification, interlibrary loan code, and exchange regulations. A list of the classification systems most commonly used in medical libraries is also included. In addition to the present *Handbook*, the first edition of which was issued in 1943, the Association sponsors a series, "Medical Library Association Publications," the first number of which was the doctoral dissertation of Miss Estelle Brodman, *The development of medical bibliography* 1954

In recent years active endeavors have been made to establish standards for medical librarianship Miss Mary Louise Marshall's presidential address in 1946 (18) and Miss Mildred Jordan's delightful and cogent presentation in 1948 (16) spearheaded action by the Association which in 1949 established a Committee on Standards for Medical Librarianship with four subcommittees on certification, curriculum, internship, and recruitment. The Certification Subcommittee assesses the qualifications of applicants for certification under the rules set forth in the by-laws adopted on April 13 1949 and detailed in the *Booklet of Information on Certification.* The Curriculum Subcommittee works to establish and continue library school courses for medical librarians both at the graduate and undergraduate library school level, and has been concerned with other phases of education for special librarianship. The work of the Internship Subcommittee centers around the standards required of libraries offering internships to those preparing themselves for positions in medical libraries. The Recruitment Subcommittee encourages the interest of high school and college students in medical librarianship as a career It has presented the

possibilities of this profession through individual talks, speeches, posters, pamphlets and periodical articles. Its recruitment activities won for the Medical Library Association the Field Award at the 1953 midwinter meeting of the American Library Association.

The part the Medical Library Association plays in the educational field does not stop with its own endeavors. It shares, through its representatives, in the work of the Council of National Library Association's Joint Committee on Library Education, particularly the latter's Subcommittee on Education for Special Librarianship. It has also for some years assisted actively in the education of medical librarians from countries outside the United States and Canada. Through its Committee on International Co-operation it has been able, under grants from the Rockefeller Foundation, to offer fellowships in medical library study and practice in the United States to more than twenty librarians from overseas. Grants from Eli Lilly and Company have made possible the Association's encouragement of medical courses in four library schools and the offering to individuals of scholarships for these courses.

This basic interest in standards naturally led the Association to take an active part in the placement of librarians and in personnel problems. A Placement Advisor has operated successfully since 1946. Because the work was much hampered by lack of information on personnel practices in medical and scientific libraries, a survey was launched in 1947 designed to supply this information, and by a continuing process the data has been kept up to date.

A further logical step toward the advancement of medical librarianship is the recognition of notable service in the profession. In 1948 the Association established the Marcia C. Noyes Award, which may be presented in alternate years, honoring individuals for outstanding achievement in the medical library field. The first award, made in 1949 went to Mrs. Eileen R. Cunningham for her national and international educational and bibliographic contributions to medical librarianship and the advancement of medical libraries (22). In 1951 the second award was presented to Mr James F Ballard in recognition of his sixty years of service to medical libraries, during which time he had given so effectively and generously of his time and talents (23). In 1953 Miss Mary Louise Marshall received the third award for her signal contributions to the growth of medical libraries and librarianship especially in recognition of her leadership in the establishment of standards for the education and certification of medical librarians (23a). The fourth award was presented in 1954 to Miss Janet Doe in recognition of her outstanding achievements in medical librarianship exemplified by her leadership in the Medical Library Association, by the

guidance she has given those entering the profession of medical librarianship by her scholarly published writings, and by her editorship of the *Handbook of Medical Library Practice* (23b)

Direct technical aid to medical librarians has been provided through the activities of various of the Association's committees. The Committee on Bibliography formerly called the Committee on Abstracting and Indexing has been a force in international medical bibliography and has encouraged the establishment and continuance of an abstract journal for medical literature. Its members advocated and its chairman participated in the work of the UNESCO Coordinating Committee on Abstracting in the Medical and Biological Sciences. The Committee on Extension Work in Medical Libraries, in existence from 1950 to 1953, made a study of service to physicians in nonurban areas. The Committee on Resources is working on the problem of gathering and maintaining adequate library collections.

Three committees have given attention to standards in medical and allied scientific libraries. That on Criteria for Medical School Libraries provided and applied a questionnaire, accompanied by a selective list of books and periodicals, designed to supplement the survey of medical schools conducted by the American Medical Association and the Association of American Medical Colleges. This document is useful for any library wishing to make an appraisal of its own resources and services. The Committee on Standards for Hospital Medical and Nursing School Libraries—no longer in existence, having finished its task—worked jointly with American Library Association and Special Libraries Association committees to establish standards for hospital and nursing school libraries, while the Committee on Criteria and Standards for Pharmacy School Libraries is serving a similar function in the field of pharmacy

The Periodicals and Serial Publications Committee has made and is making outstanding contributions to work with its form of literature. Notably it was instrumental in achieving, with the American Library Association, a reduction in the high cost of German periodicals in the 1930's. From time to time it has published various check lists of medical and dental periodicals, locating in this country titles scarce because of war time conditions and furnishing both broad and selective lists of Latin-American journals. Since 1952 it has issued *Vital Notes on Medical Periodicals* through which librarians are kept informed of new serial publications, deaths of old ones, and changes in name, sponsor or scope of continuing titles.

From a small beginning made by four physicians and four librarians, the Medical Library Association has developed into a force which is felt in all aspects of medical library work, technical, administrative, educa

tional, and cultural. Although it has consistently maintained a close interdependence between the medical profession served and the librarians who serve it, individual effort has been the keystone of the arch of the Association's progress. Only through the time, thought, money and energy contributed by many members have the activities of the Medical Library Association attained their present momentum, and only through such continuing contributions can the Association continue to advance.

Appendix

Officers and committees

Administrative officers (elective)
- Administrative and presiding officer President
- Deputy administrative and presiding officer Vice-President (President Elect)
- Recording and corresponding officer Secretary
- Financial officer Treasurer

Administrative Board (elective) Board of Directors

Special officers (appointive) Archives Curator Placement Advisor Public Relations Officer Regional Group Liaison Officer

Committees
- Standing (elective) Nominating
- Standing (appointive) Exchange (including Exchange Manager) Finance, International Cooperation Membership, Program and Entertainment, Publications, Standards for Medical Librarianship
- Special (appointive) Awards, Bibliography Criteria and Standards for Pharmacy School Libraries, Gifts and Grants, Organization Manual, Periodicals and Serial Publications, Personnel Survey Resources, Standards for Medical School Libraries.

Affiliations

Representation on joint bodies American Documentation Institute, American Standards Association Committee Z39 on Library Work and Documentation, Council of National Library Associations, Joint Committee on Library Work as a Career Joint Committee on the Protection of Cultural and Scientific Resources, Joint Committee on Standards for Pharmacy School Libraries, Joint Microcard Committee, *Union List of Serials* United States Book Exchange.

Representation on international groups Fédération Internationale de Documentation, International Federation of Library Associations, International Organization for Standardization (through Z39 of the American

Standards Association) United States National Commission for UNESCO

Membership perquisites

Perquisite	*Classifications Eligible*
Franchise	Institutional Members Active Members
Elective Office President Vice President and President Elect Secretary Treasurer Board of Directors Nominating Committee	Active Members
Elective Office Honorary Vice President and member of Board of Directors	Associate Members
Officers of Regional Groups and Chairmen of Committees	Active Members Institutional Members representatives
Committee membership	
Elective committees	Active Members
Non-elective standing committees	Active Members Associate Members Institutional Members representatives
Other non-elective committees	Active Members Institutional Members representatives
Representatives on joint committees	Active Members Associate Members Institutional Members representatives
BULLETIN	Associate Members Sustaining Members Honorary Members Institutional Members
BULLETIN at reduced rate	Active Members
Exchange service	Institutional Members

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chapter 3

The medical librarian

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THE FOUNDATIONS OF MODERN LIBRARIANSHIP were laid in the last quarter of the nineteenth century as the keepers of rapidly growing libraries came to appreciate the scholarly responsibilities of their custodianship and turned their interests toward the intellectual and literary aspects of their work. As the importance of the systematic arrangement and indexing of books came to be realized, a curriculum based on techniques was developed in the early library schools. Within the past three decades an appreciation of the educational, social and cultural place of the library in society has revised our concept of librarianship and of library education. Professional training for library work today leads the aspiring librarian through the logical stages of general education, professional library training and graduate education within the traditional program of the university. Overemphasis on technical routines has been eliminated with greater concentration on development of the broad background of scholarship, promising for the future a type of librarianship deserving of its place in the world of letters.

Medical libraries and medical librarianship have developed along somewhat different lines than in the general field. Early medical libraries were meager and were nurtured under the personal care of physicians who were themselves booklovers. As collections grew, physicians pooled the resources of their private libraries, thus bringing into being the libraries of some of the older hospitals and of medical societies, cared for by interested physicians. Indeed the organization of such society libraries was often a prime factor in the formation of the medical society itself. With the increase in medical literature of the 1870's and '80's, the physician-librarian was no longer able to care for the increasing detail of library routines and he invoked the aid of his secretary or some other medically-minded person, retaining his title as librarian. Outstanding exceptions to this general rule

were the physicians John Shaw Billings and Fielding H. Garrison, who so admirably combined vocation and avocation as administrators of medical libraries. Additional assistants to care for increased holdings continued to be drawn from those associated with physicians rather than from the newly developing group of librarians This was the situation when the Medical Library Association was founded in 1898, notably exemplified by the fact that of the eight charter members, four were physicians and four librarians (6) and it explains in part the ever-close association of physicians and those who work with them in medical libraries, an association still valid under present-day conditions.

It is interesting to note that the period of recruitment of professionally trained librarians to medical libraries approximates that of the changing concept of librarianship already mentioned. Trained personnel was needed to deal with problems rising from the extent and complexity of medical literature, and it gradually became apparent that many of the techniques of general libraries were applicable to library work in the field of medicine. Agencies controlling medical libraries began to require library school training as a qualification for the position of administrator but because of the paramount importance of subject knowledge, many still came into medical libraries from other types of medical work. The changing professional picture is evidenced by the fact that of 92 librarians in medical libraries 25 years ago, 55 per cent had had no library school training In contrast to this, of 16 librarians who joined the Medical Library Association in 1947 69 per cent were library school graduates (6, p 215) Library training however was still poorly defined as applied to medical librarianship there were no established standards by which qualification to specialty in library work might be measured.

With acceptance of librarianship as a profession, medical libraries began to consider establishment of standards for certification in their field. It became apparent that the principal difference between medical and general library work lay not in techniques and procedures, but in the subject matter itself. Whereas techniques were transferable from one type of library to another the subject content of medicine is distinctive and *individual. The earlier secretary librarian*, approaching medical library work from subject work of another type, had found a knowledge of techniques necessary the library school graduate likewise found subject knowledge in medicine to be essential. For the latter training was needed in medical terminology in the use of the many bibliographic tools, in the extensive literature of medicine, and to a lesser extent in the special techniques in the administration of medical libraries and the relative importance of various procedures.

Formal medical library education

The first formal training in medical library work had been planned for hospital and medical librarians at the University of Minnesota in the session of 1923–24 by Richard Beard, Secretary of the Medical Faculty This first attempt to provide specialized training in medical librarianship proved premature, for although the announcement was carried in the University's Bulletin for several years, no applications were received and plans for the course were abandoned. The earliest such formal instruction was actually given in the spring of 1937 by the University of Minnesota Division of Library Instruction. Several lectures on medical librarianship were given by Isabelle T Anderson and Helen H Norris, but emphasis was on hospital library work with patients rather than on medical library service to physicians. In the summer of 1939 the first course devoted exclusively to the work of the medical library was taught by Thomas P Fleming in the Columbia University School of Library Service. According to Janet Doe, here for the first time an effort was made to point out the differences between medical and general libraries (6, p 216)

During these years, interest in training for special library work was rising because of the enormous increase in the number of special libraries of all types. Eileen R. Cunningham (5) in 1940 called attention to the inadequacy of the library school undergraduate curriculum as a preparation for work in special libraries and presented an outline of subjects which might with profit be included in the undergraduate curriculum leading to library school and special library work. In 1943 Judith Wallen Hunt stated that to attain prestige and to command the respect of educators and members of other professions, medical librarians must meet definite and recognized professional standards. She believed that a medical librarian administering a medical library of 50,000 volumes should have a B.S or B.A. degree with a major in the biological sciences, a reading knowledge of German and French, one year of professional library training and one year's internship in an approved medical library (10)

It was not until the presidential address of Mary Louise Marshall before the Medical Library Association in 1946 that general interest in training for medical library work was aroused and investigation was undertaken, preparatory to outlining a program of training and establishing standards of medical librarianship (13) A program of special training at three grades recommended by the Committee on Standards was formally adopted in 1947

Grade 1 Completion of college and library school training including an approved course of instruction in medical library service.

Grade 2. In addition to the completion of training for Grade 1, a term of supervised experience of at least six months in a medical library approved by the Subcommittee on Internship

Grade 3. Graduate work in library science and in medical or related subject fields leading to an advanced degree or completion of a two-year course correlating work in library science, medical library work and medical subject work, leading to an advanced degree.

In the summer of 1948 the first course developed with the advice and approval of the Medical Library Association was taught by Estelle Brodman in the Columbia University School of Library Service. This course consists of lectures, reading discussions, and consideration of problems pertaining to the literature of medicine, nursing dentistry pharmacy and related disciplines and to the administration of a medical library A faculty member of the College of Physicians and Surgeons lectures on medical terminology The second such course was inaugurated at Emory University in the summer of 1951 by Mildred Jordan As at Columbia, study here is based primarily on the literature of medicine. Introductory lectures on the specialties of medicine are given by the medical school faculty Discussions of medical terminology and the special services and problems of medical libraries follow Problems serve to illustrate the specialized use [illegible]ographic aids in medicine.

[illegible]r opportunity for training in medical library work was offered [illegible]Veterans Administration sponsored four instructional courses [illegible]one in 1950. Using joint facilities of medical and library schools, [illegible] were given at the University of Illinois and one each at the [illegible] Southern California, University of Chicago, and Columbia [illegible]hese courses were given over a three week period and con[illegible]roximately 45 class-hours, and three semester hours of uni[illegible]vere granted. Content of instruction followed the same basic [illegible]egular courses at Columbia University and at Emory Uni[illegible]hree librarians employed by the Veterans Administration [illegible]ning in 1949 and eleven in 1950

[illegible]ng development in training for librarianship *in subject* [illegible] being conducted by the Subcommittee on Special Library [illegible]bsidiary of the Joint Committee on Library Education, [illegible] the Council of National Library Associations. The Com[illegible]ion is the investigation of areas of library education which [illegible]ave been given due attention by other agencies. Library educa[illegible]ial subject fields was one of the first areas recommended for the findings (7) of the subcommittee assigned to undertake this

project should be a valuable contribution to the study of training for special librarians.

When the Medical Library Association received a grant from the Eli Lilly Company in 1949 much of it was devoted to the promotion of education for medical librarianship Scholarships of $150 each have been offered annually to students enrolling in the Columbia and Emory courses, in addition to underwriting the cost of the course at Emory University The Medical Library Association has also administered successive grants from the Medical Division of the Rockefeller Foundation for training qualified and carefully selected librarians from abroad To date, they have come from Cuba Chile, Colombia, Brazil Uruguay Ireland, France, Austria, India and Japan, returning in each case to medical libraries in their own country

Summarizing, present consensus is that medical librarians should have a broad educational background in the liberal arts, including training in languages and the biological sciences that professional training should consist of the basic courses followed by a study of medical bibliography medical terminology medical library administration and introductory instruction in the branches of medicine that formal education should be followed by a period of supervised internship in a medical library approved for this type of training (2)

Interest in the training of medical librarians is also manifesting itself in England. Medical librarians are recruited from university graduates who have passed at least part of the professional certification administered by the Library Association and by the School of Librarianship and Archives at University College, London. The Library Association's training program consists of three successive examinations entrance, registration (associateship) and final (fellowship) The examination provides scope for the specialists, and one of the optional subjects is medical librarianship. The School of Librarianship and Archives at University College, London has a one year course leading to a Diploma in Librarianship. The examination for the diploma includes a paper on special libraries, but there is no special provision for medical librarianship or any formal instruction. Those who hold the diploma and have completed three years service in a library may register as Associates of the Library Association. If they wish to proceed to the Fellowship they must take the full final examination.

Certification

The idea of raising the standards of proficiency in librarianship by a program of certification is not a new one in the United States or abroad. In 1919 a proposal for the establishment of a National Board of Certification

for Librarians was made by the American Library Association. Other professional groups have found certification a potent means of raising standards of proficiency within their own group and in achieving acceptance and recognition of these standards by society. The American Library Association reported that professionalization of a group passes through successive stages (1) an organization is formed as the most efficient means of exchanging ideas, discussing problems and formulating policies (2) meetings of the membership are held, where policies, techniques and matters pertaining to the group are discussed and action taken (3) publications are issued for the wider discussion and dissemination of professional knowledge among the members (4) curricula are developed to give special training as necessary to those who perform the functions of the profession (5) standards are established as measures of proficiency and in order to promote recognition of these standards and (6) the profession reaches a stage where specialists develop within the group and the whole process is repeated (12)

In the early 1940's medical librarianship had reached the fourth stage of its development as a profession. Curricula had been established and ideas for setting up standards, which could be motivated by a certification program, were evolving. The first appeal for the adoption of such a program was made by the author in two articles which appeared in 1941 (15a) and 1946 (16). The Medical Library Association, meeting in New Haven in 1946, appointed a committee to develop a training program and included in the same directive investigation of the advisability of the adoption of professional standards. The study was continued over three years and at the Association's meeting in Galveston in 1949 a certification program based on the three levels of training already described in this chapter was approved. The following is a summary of the code

A. 1) A Charter Certification may be granted to those who, on the day of the program's adoption have completed five years of professional experience in a medical or allied scientific library (hereinafter designated as a "medical library"). Experience will be judged as professional or nonprofessional on the basis of the study *Descriptive list of professional and non-professional duties in libraries* of the American Library Association Board of Personnel Administration, as applied to medical libraries by the Committee on Task Analysis of the Medical Library Association.

2) On those who have entered the medical library field within five years prior to the program adoption a Charter Certification may be conferred, subject to the conditions as stated in the preceding paragraph, on completion of the period of five years experience.

3) On a date five years from the time of the adoption of the plan for certification, Charter Certification will be closed.

B. Certification at Grades 1 2 and 3, corresponding to approved levels of medical library training may be conferred by the Committee on Standards for Medical Librarianship on those presenting proper credentials of completion of prescribed training

C. Certification may be granted, in exceptional cases, to persons presenting credentials other than those as here specified, by examination given at the discretion of the Subcommittee on Certification on the basis of individual case study

For protection of the Association, each applicant for certification is required to sign the following pledge

I agree to hold said Medical Library Association, Inc., its members, examiners, officers, and agents free from any damage or claim for damage or complaint, by reason of any action they or any of them, may take in connection with this application, any examination, the grade or grades given with respect to any examination and/or the failure of said Association to issue to me a Certificate of Medical Librarianship

A *Booklet of information on certification* issued by the Medical Library Association, enumerates the prospective benefits of the certification program

1. Certification will form a criterion by which interested professional and lay groups may judge the qualifications of a medical librarian.
2. Certification will be a reliable guide in the choice of medical librarians.
3. Qualifications of applicants for certification will indirectly result in improved medical librarianship and
4. Elevate the bibliographical standards of the medical and allied professions by improving professional library services.

Applicants for certification may secure official forms and information from the Chairman of the Association's Subcommittee on Certification. Within the first year of the program's operation, 56 applications for certification were approved.

Professional avocations

In recent years medical schools have been giving increased recognition to the functions of the medical library as a teaching agency A course of study is no longer based on a single textbook, but rather on reading lists of current medical materials, and the student is taught to secure information

through evaluating opinions expressed in the writings of several physicians rather than to rely on the exposition of a single text. In such a teaching program the medical library and its service assume a position of real importance.[1]

Many medical librarians have been contributors to professional and historical literature. In the development of any profession, the stage is soon reached when publication becomes necessary for the purpose of dissemination of information and the promotion of wider discussion of professional problems. This was the case in the Medical Library Association's own periodical publication, first known as *Medical Libraries* and later as *Bulletin of the Medical Library Association* It contains many articles by medical librarians, historical, professional and bibliographic. The *Handbook of medical library practice* based on a manuscript by M. Irene Jones and compiled by a Committee of the Medical Library Association under the editorship of Janet Doe appeared in 1943. *A medical bibliography* by Fielding H. Garrison, revised by Leslie T Morton (9) also appeared in 1943. This work is a check list of texts illustrating the history of the medical sciences. Other British publications are three books by John L. Thornton which are worthy of special mention (21–23) Within recent years there have appeared extensive publications on medical library work and medical bibliography Several medical classification systems devised by medical librarians are described in Chapter 6. A doctoral dissertation by Estelle Brodman on the development of medical bibliography constitutes a notable addition to the growing professional literature in this field (1) A textbook by William D Postell introducing medical school students to the literature of medicine has appeared recently (15)

It is natural that as "keepers of books" librarians should develop scholarly interests in other than professional subjects. This is true of medical

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[1] The following librarians have been listed in their school catalogs as members of the teaching faculty of their respective schools Isabelle T Anderson, assistant professor in library science; Violet Baird, assistant in library science; Sarah C. Brown, instructor in medical library science; Marguerite E. Campbell, assistant professor of library science; Elizabeth F Carr instructor in medicine (history); Elizabeth Webb Cooper instructor in medical library science; Helen Crawford, associate professor; Mildred R. Crowe, assistant professor of medical library science; Eileen R. Cunningham, professor of medical library science; Marjorie J Darrach, director of medical libraries, with full professorial rank; Marion F Dondale, associate professor of medical literature; Judith Farrar assistant professor of medical literature; Thomas P Fleming, professor of library science; Ora K. Goodman, assistant professor; Bertha B. Hallam, professor; Rosalie H. Held, instructor in library science; Bernice M. Hetzner associate professor; Ann Hodge, instructor in medical bibliography; Esther R. Howard, instructor in library science; Margaret E. Hughes, assistant professor; Frederick G. Kilgour lecturer in the history of science; Eleanor Boykin Lesher instructor in library science; Mary Louise Marshall, professor of medical bibliography; William D. Postell, professor of medical bibliography; Ida M. Robinson, associate professor of library science. Librarians in some other schools have faculty standing without being listed in their catalogs.

librarians, to whom may be attributed a number of such contributions. Among these are the noteworthy bibliography of the works of Ambroise Paré by Janet Doe, catalogs of the manuscripts and incunabula in the libraries of James F. Ballard and of Dorothy M. Schullian and Francis E. Sommer, Thomas E. Keys' history of surgical anesthesia and his compilation with Dr. Frederick Arthur Willius of the classics of cardiology, W. R. LeFanu's scholarly contribution on Edward Jenner, William D. Postell's study of the health of slaves on Southern plantations, and Fanny J. Anderson's history of medicine in Detroit.[3] Four medical librarians are listed among the consulting editors of the *Journal of the History of Medicine and Allied Sciences*. Librarians have contributed numerous papers on historical subjects to periodicals. Librarians have also done much toward developing and preserving our cultural inheritance by collecting and organizing historical collections. As observed by Colonel Harold W. Jones, more special collections in medical libraries are devoted to the history of medicine than to any other subject (11), and in many cases the librarians themselves have nurtured the interest in the history of medicine which has resulted in the collection, and have encouraged use of the material through exhibits and publications of bibliographies and papers based on the library's holdings. Librarians have also been active in promoting the organization of societies devoted to the study of medical history and have continued to work actively with these groups.

Qualifications and salaries

It is important to emphasize the personal qualifications of the librarian. Mary Louise Marshall (13) pointed out that the attributes of those who wished to become medical librarians were the same as those for general library work enumerated by Leon Carnovsky and K. S. Gapp. According to Carnovsky, desirable attributes are the ability to get along with people, a bookish interest, imagination, and a mind which prefers organization to confusion (4). Gapp believes that in addition a librarian should have a certain curiosity, an intellectual and emotional drive which gives some

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[3] Fanny J. Anderson, *Doctors under three flags* (Detroit, Wayne Univ. Pr., 1951).
James F. Ballard, comp. *A catalogue of the medieval and Renaissance manuscripts and incunabula in the Boston Medical Library* (Boston, 1944).
Janet Doe, *Bibliography of the works of Ambroise Paré* (Chicago, Univ. of Chicago Pr., 1937).
Thomas E. Keys, *The history of surgical anesthesia* (New York, Schuman, 1945).
W. R. LeFanu, *A bio-bibliography of Edward Jenner 1749-1823* (Philadelphia, Lippincott, 1951).
William D. Postell, *The health of slaves on Southern plantations* (Baton Rouge, Louisiana State Univ. Pr., 1951).
Dorothy M. Schullian and Francis E. Sommer, *A catalogue of incunabula and manuscripts in the Army Medical Library* (New York, Schuman, 1950).
Frederick Arthur Willius and Thomas E. Keys, *Cardiac classics* (St. Louis, Mosby, 1941).

evidence of future growth, and an appreciation of the relation of routines to knowledge, the social structure, and educational objectives (8) To these qualities Marshall would add adaptability a pleasing personality some nerve (rather than nerves) a sense of humor and a strong constitution (13, p. 248)

Opportunities in the field of medical librarianship are increasing rapidly as collections grow in size and increase in number Over a hundred new medical libraries became institutional members of the Medical Library Association between 1945 and 1950 (18) In 1948 the Association s Placement Advisor reported openings for 22 medical librarians, while in 1950 this figure was increased to 79 (17) Further need of professionalization is shown in the Advisor s survey of 1949 At that time only 7 per cent of the libraries surveyed required formalized qualifications for the position of head librarian, and 8.5 per cent required training for positions as professional assistants. Highest qualifications were required by medical school libraries, but even in this group only 42.8 per cent required that the head librarian have college and library school degrees and medical library experience (19) The 1952 survey showed that 71 per cent of librarians in all types of medical libraries hold library school degrees 69 per cent of medical school librarians, and 63 per cent of hospital librarians (20)

Salaries paid to medical librarians are about on a par with those received by other librarians, according to surveys sponsored by the Medical Library Association. An encouraging aspect is that while in the 1948 survey 50.1 per cent of the professional salaries reported were below the American Library Association s recommended minimum of $2,800 in the 1952 survey only 27.5 per cent are below the minimum of $3,294 then recommended by the Association. Another encouraging trend is the apparent tendency to base a librarian s salary on his personal qualifications.

Professional advancement

✓The medical librarian has a responsibility for keeping abreast of development in two subject fields, medicine and librarianship. For events and trends in the medical and scientific world, he should not fail to scan regularly the *Journal of the American Medical Association Science* and, if possible, the *British Medical Journal Canadian Medical Association Journal* and *Nature* The medical school librarian should scan the *Journal of Medical Education* Workers in the fields of dentistry pharmacy or in hospitals should read the important journals in those fields, particularly those officially sponsored by associations. While highly technical articles may be beyond their understanding, other medical reports, news notes, and book reviews should be read regularly Attendance at medical staff meetings and

local scientific and medical meetings is profitable both as a means of learning and in the promotion of public relations.

The librarian should also keep abreast of activities and advances in professional librarianship, both general and special, by attending local, state and national library association meetings whenever possible. Reading should include certainly the *Bulletin of the Medical Library Association* and some such professional journals as the *American Library Association Bulletin Armed Forces Medical Library News College and Research Libraries Information Bulletin of the Library of Congress Library Journal Library Quarterly UNESCO Bulletin for Libraries Special Libraries* and *Wilson Library Bulletin*

A lively interest in medical libraries will prompt the medical librarian to become a member of the Medical Library Association. The importance of attendance at the Association's annual meetings cannot be too highly stressed. For those unable to attend this meeting, regional groups of the Association have been organized in most areas. The medical librarian will experience great satisfaction from active participation in the affairs of the Medical Library Association as he realizes the extent of its dedication to furthering the interests of medical libraries and librarianship He will be associated with a group of medical and professional workers with a common background of interests, problems, and satisfactions The humanitarian subject matter with which they deal places too serious a value on their reward to permit them to become indifferent to the task at hand.

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chapter 4

Administration

MILDRED JORDAN

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THIS CHAPTER might have been called much more aptly "Fragments of Administration," for of the generally accepted elements of the administrative function—planning, organizing, staffing directing, co-ordinating, reporting, and budgeting—only two, organizing and budgeting, and a special phase of planning that devoted to the quarters of the library will be discussed. The others are included elsewhere in the book.

Organizing

The first of these, organizing relates to the establishment of a structure of authority which is carefully defined and co ordinated for the attainment of specific objectives. (26, p 97) In general, it may be said that the library is concerned with the objectives of the organization of which it is a part. Specifically the objectives of the organization are either medical education, medical research, or the care of the patient, or a combination of these. As the medical world is a complex one, it follows that libraries called "medical will not all have exactly the same objectives or consequently the same organizational structure For example the library maintained by a pharmaceutical house will have different objectives from those of a library connected with a school of pharmacy the library of an institute dedicated to research will have different objectives from those of one connected with a school whose primary purpose may be teaching and the library of a medical society will have different objectives from any of these.

Chart I page 44 and Chart II, page 45 from the first edition of this book show the organizational structure if not the objectives of two types of libraries.

S. R. Ranganathan's comment (20, p. 28) and the first part of his organizational chart (20, p 18) may be of more value than the preceding ones for what he calls the "do-all librarian."

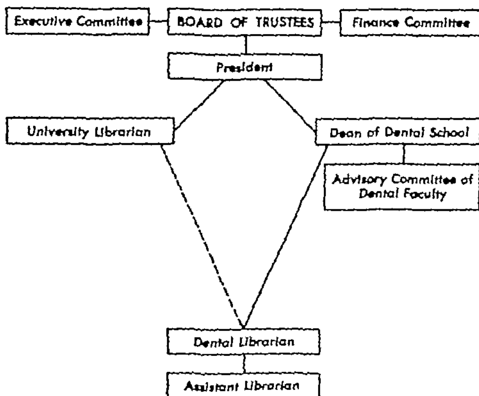
> The question may be asked of what use is an elaborate functional analysis in planning the administrative work of a small library run by one man,—a type that is numerically the greatest in our country [India] to-day My answer is that even a do-all librarian can discharge his duties with greater ease, thoroughness and efficiency if he knows the different functions to be performed, the different jobs to be attended to and the order in which they should be taken up A well thought-out time table for the jobs is quite necessary Again, there is the Fifth Law of Library Science, A library is a growing organism. The small library of to-day will soon grow in size and in staff

Even the "do-all librarian must know the thousand-and-one tasks to be done in the library These have been carefully and comprehensively enumerated by the American Library Association (1) in a special study and the Medical Library Association (23) after further examining this study in the light of its own needs has accepted it with only a few additions. With this as a basis it is comparatively simple to work out the primary and secondary divisions of labor All of the tasks or groups of tasks might be copied on slips of paper and divided into two main groups, Technical Services and Services to the Public. Further subdivisions may be worked out as the need arises and funds permit. Based on this procedure and incorporating certain beliefs of the author regarding administration evolved from experiment, practice, and long experience, Chart IV shows a suggested model for the organization of a medical school library The paragraph below this chart states some of the conditions essential to the successful functioning of the proposed organization.

Regardless of the objectives, the librarian is deeply concerned with his relationship to the governing body" whether a dean, a director a president, a committee, or a board. He is also concerned with his relationship to the rest of the library staff and the manner in which authority and responsibility descend in the whole hierarchy It is of paramount importance that the medical librarian derive his authority and responsibility directly from the top administrator of the unit of which the library is a part. If this could be accepted, two controversial matters which distress a number of medical librarians could be settled

T reports published after the completion of this chapter those by Deitrick (6) and by the Medical Library Association (17) are particularly important to the libraries of medical schools.

Chart I. Organization chart of Northwestern University Dental School Library

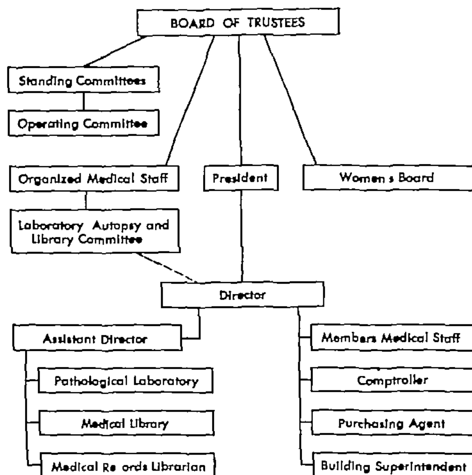


The University Librarian is nominal head of the Dental Library but both the Dental Librarian and the Assistant Librarian are appointed by the Dean of the Dental School. The Advisory Committee of the Dental Faculty functions also as a library committee. Conjointly with the Dean, the Dental Librarian is responsible for book selection. The Dental Librarian serves on no committees by virtue of his office. Regarding matters relating to budget and physical plant the Dental Librarian consults the Dean.

The first of these would be the removal of all executive function or authority from library committees.[a] This is recommended by the very nature of committees. "A committee, as defined by L. Urwick in a special section on this subject, "is a group of persons to whom certain functions have been assigned on condition that they discharge those functions conjointly and in a corporate capacity. A unit of organisation in this form is

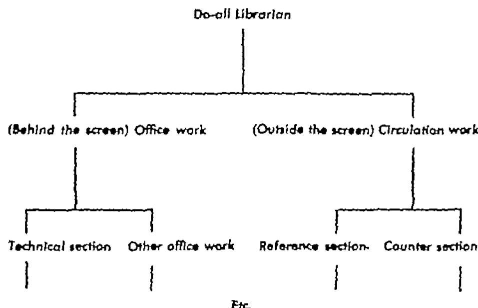
[a] For different point of view, see McCarthy (16)

Chart II. Organization chart of St. Luke's Hospital Medical Library Chicago



The Medical Librarian is appointed by the Medical Director with or without recommendation of the Laboratory Autopsy and Library Committee. This committee is appointed by the Organized Medical Staff and functions in a purely advisory capacity both to the Board of Trustees and to the Staff. Matters of policy are referred to the Staff, through the Committee, for decisions and, on their approval, are referred back to the Director for action. The annual budget is submitted to the Director through the Comptroller Questions concerning the physical plant are referred to the Director through the Building Superintendent.

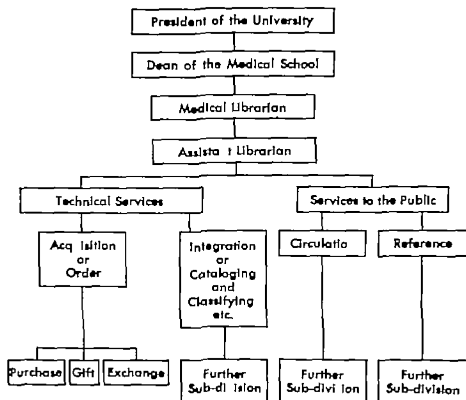
Chart III. Excerpt from Ranganathan's suggested organizational chart showing how functions divide and subdivide as the library grows



always an alternative to employing an individual to perform the same functions" (24 p. 71) The *Report of the President's Committee on Administrative Management* states that "The conspicuously well-managed administrative units in the Government are almost without exception headed by single administrators. (24 p. 71) Much of the literature of library administration supports this conclusion. William M. Randall and Francis L. D Goodrich in their section on the library committee go so far as to say "This designation of administrative authority [in the library committee] seldom fails to have a seriously harmful effect upon the library (19 p. 86) Guy R Lyle in his discussion of the administration of a college library includes some typical comments of librarians

"The Library Committee has not been consulted more than three times in the last seven years. "The Library Committee should study and survey the library book collections but is not willing to do the work. One extremely pessimistic librarian writes, I have yet to see any faculty committee interested in anything more than a division of the spoils. These are the views of a minority Beside them should be placed the views of another small group who are equally emphatic in their praise of the committee. The majority however withhold

Chart IV Suggested chart of medical school library showing functional organization



The medical library is recognized as a department of the medical school on the same basis as are the Departments of Anatomy Surgery etc. The medical librarian is appointed on the same basis as the chairman of any other department of the medical school. The medical librarian has faculty status and rank compatible with his educational attainments, his responsibilities and his abilities in discharging them. The medical librarian is a member of the dean's committee of department heads with the same right to vote as other department heads. There is no library committee as such. The subject knowledge of the individual members of the medical school faculty is tapped for advice in the selection of materials for the collection. Special committees for specific areas of study may be appointed from time to time, at the librarian's request. Personnel, budgeting, etc., are the province of the librarian.

praise and criticism alike, but one may infer from what is left unsaid that the committee has not been a strong factor in library development. (15 p. 47)

Similar information with similar expression was obtained from librarians of medical schools through a questionnaire sent out in 1951 by the author Almost without exception the answer to the first question under Library Committee, 'Do you have one?" was "Yes. Despite this prevalent affirmative, in a significant number of cases the library functioned without a committee, as the committee had not met in a number of years or only once or twice in six or seven years. The remaining number of committees was divided into three categories one, serving in an advisory capacity only two serving in an executive capacity and three, partially executive and partially advisory A few of the librarians strongly opposed a committee while a few others were as strongly in favor Some stated that they found the committee useful in protecting them from criticism and in backing them up The majority found it useful only in an advisory capacity especially in selection of materials Many of the comments bore witness to Urwick s explanation of the popularity of the committee form. He outlines a number of principal causes (24 p 73) The first of these is "Lack of precision in defining major objectives. As a consequence, "A committee, he writes, is brought into being not to do something but to cover up the fact that those responsible have not decided what to do." The second is failure to restrain internal objectives of parts of organisations. As a consequence, "A committee is brought into being not to further the general objectives, but because its members represent interests to which they are, quite improperly giving priority The third one which he states very succinctly "Individuals seek to escape responsibility is as damning as it is prevalent. A final quotation concerning committees is Elizabeth Kientzle s last sentence in her article, "The College Librarian and the Library Committee, based on her master s thesis "If the library committee is no more than the vestigial remains of a forgotten era in librarianship, whose duties can be better performed by others, then there is no reason for its continued existence." (13, p 126)

If the librarian has enough of what it takes—the necessary brains, education, courage, and energy in short, if he is the epitome of the medical librarian as delineated by William D Postell in Chapter 3 of this book and by Mildred R. Crowe in Chapter 10 then it would seem high time that the *administration of the library became the prerogative of the librarian.* It is of course presupposed that the librarian would take his proper place in the administrative hierarchy of which the library is a part and thus be a part of the policy making body It is also presupposed that he be strong enough

to take both praise and blame. All this is dependent almost completely on the educational achievements, knowledge, ability and personality of the librarian, and what may be even more important, the recognition of those qualities by others In the case of the librarian of the medical school library formal recognition would result in faculty status and rank. A gratifying number of librarians have achieved this (14) some of whom are listed in Chapter 3. For librarians not so connected the equivalent would be the informal recognition by the administration that librarians are also educators and administrators and not merely housekeepers of service stations or a "check-boy in the parcel room of culture. (22, p. 138)

The second highly controversial point affects almost exclusively those libraries of schools connected with a college or university The controversy is usually referred to as centralization versus decentralization. There is a wealth of literature available and it behooves the medical librarian to be conversant with it. Louis Round Wilson and Maurice F Tauber summarize the arguments in *The university library* (26, p 35–37 127–37 193–94) and cite authorities. Robert A. Miller one of these, says in his final conclusion

> Without question, there is a trend toward separate libraries in large universities. In most cases, these separate libraries serve the graduate or professional departments of the university The factors of adequacy use of books, and accessibility combine here to offset the pressure toward centralization exerted by the arguments on cost and interrelationship.
>
> A trend within a trend is the grouping of departments to receive service from a separate library By this device, the centralist arguments on cost and interrelation are largely overcome. (18, p 134–35)

"The criterion to be considered, assert Wilson and Tauber is the degree to which centralization or decentralization promises to facilitate and encourage research (26, p 131) or in the words of Harvie Branscomb "Efficiency has no meaning except with reference to the accomplishment of some particular end In the case of the library this is the furthering of the teaching and research work of the several departments. (4 p. 134) Walter Hausdorfer considers that Because of the nature of its materials and purpose, the professional school library can never become any more than affiliated with the general library " (10, p. 76)

It would seem after a careful if not unbiased, study of the extensive literature on the subject, that the university librarians have themselves, in some cases unwittingly answered the question in favor of the separate medical library The attitudes of the librarians of the professional schools with regard to the controversy as reported by them through the previously mentioned questionnaire, are more varied than the arguments for or against

There are a goodly and encouraging number not involved. The reactions of the librarians entangled run the gamut from those violently opposed to those in favor In between we have apathy resignation, placidity successful adjustment.

Just as the administrative organization of the medical library is concerned with the relationship of the librarian to his superiors in the hierarchy so is it concerned with the relationship of the librarian to his staff his staff to him and to each other While the *principles* of administration, as well as the *elements* listed at the beginning of the chapter also apply to the first relationship it seemed more appropriate to discuss them here. In 1916, Henri Fayol enumerated fourteen principles in his *Administration industrielle et générale* (9) The ones that Fayol chose to develop as examples and because of their importance are division of work authority and responsibility discipline, unity of command, unity of direction subordination of individual interests to general interest, remuneration of personnel centralization, scalar chain, order equity stability of tenure of personnel, initiative, *esprit de corps* Most of these are self-explanatory Wilson and Tauber (26, p. 97–102) have restated them, indicating their application to the university library Both books are rewarding reading as indeed are a number of titles (3, 5 21 24) in the theory and application of administration, or "management" as it is usually called in the business world.

Luther H. Evans in his "Principles of Public Administration emphasizes one that is high in importance—that of democratic participation (8 p. 2) He regards it as essential as good leadership and stability" "The rank and file," he says, should discuss and participate in the formation of an organization. These same people should help formulate the operating procedures and policies which are used to help the organization accomplish its goal or program. When all the people are allowed to participate, there will usually be wider acceptance of the organization s programs and efforts." Ranganathan says that "A close, intimate, personal co-operation between the librarian and his staff is the essence of scientific administration." He continues the development of the democratic theme

> As a first step in the elimination of waste in personality sane leadership secures the assent of the staff. Thereby it releases the whole energy instead of a small part. There is no question as to which type of leadership will unfold the personality most fully and eliminate waste therein. But men at the head of affairs have often lacked the patience, the wisdom and the spiritual insight to use the slower but in the end the more productive method of working *with* the staff (20, p. 33 41)

There are a number of devices that are useful in facilitating the administration of the library Organizational charts such as those shown earlier are helpful. Process charts, charts showing the flow of work, and so on, all contribute to achieving organizational skill. The staff manual is perhaps the most valuable of these devices, but it must be kept up to date. It is probably unnecessary to add that for this reason a loose leaf form is recommended. The manual would include such charts as have been mentioned as well as anything else that the particular library staff desires. Judith Wallen Hunt suggests both an organizational and an instructional manual or a combination of the two for the small library (11 p. 16–17) She outlines in some detail what might be included. One of the manuals which is especially helpful as a model is that written by the staff of Antioch College (2) A bibliography of manuals is given at the end of an article by Wilson and Tauber on "Staff Manuals in College and University Libraries. (25) A number of medical librarians have written such manuals for their libraries. One of these, Eileen R. Cunningham of the Vanderbilt medical library is very generous about lending her manual.

A code of ethics worked out, accepted and adopted by the staff is a happy solution to some of the problems inherent in human relationships. The code of the Denver Public Library is an excellent model, as the following excerpts show

> *I hold every man a debtor to his profession from the which as men of course do seek to receive countenance and profit so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.*—BACON

Members of the staff represent the library—book power and book service—and should so represent it as to win recognition for the institution rather than credit for the individual

Members of the staff are interpreters of the library to the public. Also to a new patron an assistant is the sole interpreter for that day and the library service may be materially helped or harmed by these individual contacts. The staff owes friendly and courteous attention to all patrons who use the library

Loyalty to the institution involves, in part, submergence of the individual to the institution. Manifestations of egoism such as criticism of the library the librarian, or other members of the staff, or the claiming of individual credit for work done as a staff member when credit should belong to the institution, are examples of disloyalty Criticism should be offered constructively and to the proper authority It should be remembered that many decisions in library management are due to circumstances over which the administration has no control and of which the criticizer has no knowledge. Under no circumstances should a member of the staff belittle the library

Suggestions for the improvement of service, criticism of policy and complaints of maladjustments should be taken to the immediate superior Constructive criticism or correction by responsible superiors is necessary in the efficiency of any service and should be accepted by assistants without personal resentment.

Because the morale of the staff is considered necessary to the smooth working of the institution and the good service that it can render assistants compatibility with one another is as important as their competency

The atmosphere of the library is disturbed unless the workers preserve harmony and a spirit of cooperation among themselves hence the staff relations should be friendly good-humored, and unselfish. It should be remembered that gossip is the refuge of the empty-minded.

Good health is a prerequisite of good service and involves the right use of free time so that a proper balance is maintained between work, recreation, and rest.

All libraries and librarians have a duty not only to their patrons but also to the profession as a whole because cooperation between libraries and librarians makes for better service of every library This loyalty to librarianship involves membership and activity in one or more professional organizations, the reading of professional literature, and interest in advancing methods and ideals of the profession. (7 p 4-5)

At least one more paragraph should be added for the code of the medical library staff It should be devoted to what the lawyers call "privileged communication and might be lifted from the Hippocratic Oath

Whatsoever in the course of practice I see or hear (or even outside my practice in social intercourse) that ought never to be published abroad, I will not divulge, but consider such things to be *holy secrets. (12, p 11)*

Budgeting

Budgetary needs will vary with services to be performed, with teaching methods, with research activities, with book production and prices, and with arrears to be defrayed. Therefore the best method of deriving a proper budget is to define clearly the objectives of the school, hospital or other group to be served to indicate the library s role in the educational program to decide on specific means of implementing its functions and to make a cost analysis of items indicated. Only by such methods can be ascertained the amount necessary for successful library operation. (33, p 19)

Here in a nutshell is what one really needs to know about this all-important subject. If performance equals knowledge, the library is assured

of adequate financial support. For with Hunt's dictum there can be no argument—but it is frequently unbelievably difficult to obtain a clear definition of the organization's objectives and the role of the library in its educational program.

For the over all budget one formula, "established through the experience of college and university libraries for determining the amounts which should be provided for the normal administration of university libraries, is 50–60 per cent for personnel, 40–30 per cent for books, periodicals, and binding, and 10 per cent for supplies and other purposes." (43, p 13) How this formula works out in actual practice may be checked, since statistics on various libraries' budgets, showing breakdowns as well as totals, are published each year in *College and Research Libraries* In a library emphasizing service, as most medical libraries do, the cost for personnel will be more. Hausdorfer reports, "the average percentages for different types of libraries show that from 60% to 90% of the budget is used for salaries, with the larger number of cases clustering around 70%." (32, p 181)

With a general idea in mind of the desired distribution of the desired budget, certain procedures are worth investigating and possibly pursuing One which has been used in bringing up a very low budget is comparison with minimum standards—where these have been established. Comparison with past expenditures, unless done with great skill, is dangerous, for there is always the possibility of perpetuating a viciously low budget. A safer and usually more effective method is comparison with other similar but better supported libraries. Another possibility to be explored is the percentage of the library budget to the total budget of the institution. Self surveys, while time consuming are frequently productive and are always worth while.

The American Library Association's *Classification and pay plans for libraries in institutions of higher education* offers an approach, but it is hardly practicable for medical libraries. The Subcommittee on Budgets of A. L. A. states that it has given much time and thought in its effort to set up classes of professional school libraries such as law and medicine—particularly when these schools are part of a university plexus. The service unit formula was tried as was also a combination of it and a student formula. Both were found unsatisfactory (28, p. xvii) However the work does have a few points that sometimes can be used effectively

The amount to be spent per student and the amount to be spent per faculty member are other methods sometimes used. According to one study (36, p 286) the annual cost of the library averages about $200 per professional-technical man. The figure of $25 per student was formerly recommended as producing adequate support for the college library

In trying to use this figure as recently as 1948, surveyors of certain colleges found it necessary to recommend approximately $50 per student (34) In *Medical education in the United States 1934–1939* it was reported that expenditures for library service for each student ranged from $3.41 to $181 Total expenditures for each student ranged from $272 to $4,319 with a median of $677 (30, p 92, 113) It should be remembered that these figures are of the depression years. For more recent information, we have this statement "The range of expenditures per student by the medical schools will vary in 1949–1950 from $917 to $9,500 For the country as a whole the average expenditure per student will be $2,577 and the median $2,364" (31 p 43)

One thing is sure, the cost of medical education and medical research is high. It follows that the cost of a medical library with an adequate collection for education and research, and a staff adequate in number and in education and ability to collect organize, and interpret this collection, will be high. The medical collection is heavily loaded with periodicals which unfortunately are expensive and which require extra care and substantial binding The librarian specializing in medical librarianship with its peculiar demands should expect and receive a commensurate salary a justifiable item of cost.

This principle of higher pay for specialization is recognized in the salary scale of the Veterans Administration. For example, a medical librarian never begins with a lower classification than Grade 9 whereas a librarian, not medical, can begin with a classification of Grade 7 Currently the beginning salary for Grade 7 is $4,205 while that of Grade 9 is $5,060 This same principle seems to be recognized by the administrators of institutions having special technical libraries. For librarians of such libraries with a staff of two to three, a salary of $4,000 to $7,000 has been suggested. For similar libraries with a staff of from ten to thirty a salary of $5,000 to $12,000 has been suggested (41 p. 18) Some interesting if depressing reports which did not recognize the principle of more pay for more specialization have been published in the *Bulletin of the Medical Library Association* (38, 39) and in *Special Libraries* (42)

There are always the American Library Association dicta. A recent record of these was distributed in mimeographed form at the Midwinter Meeting of 1952. The salaries proposed by the A. L. A. Board on Personnel Administration for the members of the professional service are shown in the table on page 55 (27)

Whatever the budget, careful bookkeeping and accounting procedures are in order It is essential that up-to-the-minute information should be available at any time on the library's income, obligations and actual ex

Rates for Professional Service Recommended for 1952

Grade	Minimum Step 1	Step 2	Step 3	Step 4	Maximum Step 5
1	$ 3294	$ 3414	$ 3534	$ 3654	$ 3774
2	3859	4009	4159	4309	4459
3	4565	4745	4925	5105	5285
4	5299	5509	5719	5929	6139
5	6266	6506	6746	6986	7226
6	7132	7432	7732	8032	8332
7	8470	8890	9310	9730	10150
8	9994	10594	11194	11794	12394
9	12141	12921	13701	14481	15261
10	15384	16284	17184	18084	18984

penditures, and thus as detailed as desirable. The following classification has proved useful—if carefully kept, it has the added value of being helpful in making up future budgets.

Salaries
- Professional
- Subprofessional
- Clerical
- Student assistants

Equipment

Supplies (including office and library)

Books
- Current
- Out-of-print
- Rare
- Loose-leaf pages
- Replacements

Periodicals
- Current subscriptions
- Back files
- Replacements

Binding
- Current periodicals
- Back files
- Books
- Rebinding

Photoduplication
- Armed Forces Medical Library coupons

Library of Congress cards

Library membership in societies

Travel

Telephone and telegraph

Postage

Express

Freight

Insurance

One of these—insurance—is so frequently overlooked that it needs a paragraph of its own. Dorothea M. Singer has presented the library profession with a very practical guide In summary she has this to say

> Some general recommendations can be made to all library administrators Get comprehensive protection whenever it is available. Insure the book and fine arts contents under an all-risk policy and protect the building and the other contents under fire policies with extended coverage endorsement. Be sure to have the most important coverages fire, water damage, explosion, and liability insurance.

Secure long-term policies, and budget the premium payments conveniently
Keep informed of loss-prevention developments.

Use the services of your insurance specialist, and have a survey made of all your needs (40, p. 87)

One of her points may come as a surprise to those not familiar with the problems of insurance. For this reason it should be emphasized "The task of establishing the value of property to be insured is the sole responsibility of the one taking out the insurance and not, as is often erroneously assumed, that of the insurance company (40, p 27)

While the evaluation of the building, equipment, and furniture is not too difficult (and frequently is not the responsibility of the librarian) that of the collection is. Though the American Library Association (29 p. 369) has from time to time published the results of its Insurance Committee's work, its figures are obviously too low for medical volumes. Those used by Charles W Mixer (37 p. 22) in his report of the evaluation of the libraries of Columbia University are more rational $5.50 per volume for medical books and $12 per volume for bound medical periodicals. This last figure, while now too low shows recognition of the fact that medical periodicals appreciate rather than depreciate in value as time goes on. The evaluation of the card catalog is also a problem. Mixer reports an estimate of 10c per card with exceptions for certain catalogs and a figure of 5c per card for the shelf list. These figures, of course, did not include the cataloging cost. The actual basis was "(a) the cost of the card stock and (b) the cost of the personnel which would be involved in duplicating the cards and in filing them in the catalogs."

In view of all the talents called for in budget building ranging as they do from those of the statistician to the rarer ones brought out in the social amenities of collecting library gifts, Blanche Prichard McCrum admits that even "the stoutest heart may well quail Yet budgets, like Rome, are not built in a day" (35 p. 136) The first golden rule, then, as she points out, is to begin planning for the future as soon as the present is settled Proof of one's needs must accompany a budget request. "This proof lies hidden away in many library activities, hardly one of which if studied and analyzed over a period of months, will not demonstrate needs both convincing and moving (35 p. 132) This proof presented by a librarian who with his staff has built up genuine friendship for the library friendship that comes after intelligent service, gladly given, (35 p. 132) insures, at the least, sympathetic consideration. Frequently it produces gratifying results. Always, it educates and prepares the way for subsequent budgets.

A last word of wisdom on defense of the budget from that very wise librarian whose publications may be read with profit by all librarians

Nor is the faithful librarian, working with zeal in his own office, any guarantee of privilege for his library However repellent a struggle is to him, his is an aggressive post, and the sooner he admits it, the better (35 p. 135)

Planning the library

Just as purpose precedes organization, function precedes form. What is to be done in the library? Who is going to do it? How? When? With what? "A building say *Joseph L. Wheeler and Alfred Morton Githens,* is a shell enclosing an organism. To design the shell intelligently the organism must be scrutinized, its elements and their sizes determined, the requirements of each studied, and their functional interrelationships thoroughly understood." (72, p 75) The importance of function, of planning from the inside out, has been emphasized time and again. It is somewhat disheartening, then, to find the number of people connected with the planning of a library who still give to this essential lip service only

One of the former presidents of the American Library Association Charles A. Cutter is quoted as saying that the architect is the natural enemy of the librarian. (60, p 339) This sentiment appears time and again in the literature and in personal communication among librarians. The wise librarian should take heed However one might change the natural to artificial and hold the librarian guilty of creating the artificial enmity until such time as he produced a clear answer to the questions in the first paragraph. This answer when formulated, is commonly called the "program"—the more perfect it is, the more perfect will be the library It entails endless study and knowledge and it should be the responsibility of the librarian. One of the best examples in the literature is that of John E. Burchard (65) for the Massachusetts Institute of Technology For the medical librarian, a more pertinent if more modest document, which I am sure its author would prefer to call a memorandum is that written by Bertha B. Hallam (51)

In achieving this program, we begin again with what is the primary objective of the library stated as clearly as possible. The specific objectives that contribute to the whole should be included also and stated with equal clarity Question after question must be asked and answered, quantitatively whenever possible, concerning the users, the collection, the staff and the interrelationship of the three.

Who are the people for which the objective is desired? Are they students? of medicine? of pharmacy dentistry or nursing? Are they in-

terns? Are they practicing physicians, or dentists, or public health workers? Are they research workers? In short, what are the categories of users and what is the number in each category? To which category or categories is owed the first responsibility? To what service are they entitled?

There are not only categories of users, but characteristics of the categories to be considered. Common to practically all readers is the desire for closeness to the material or materials which they need—with provision made for a convenient means of using it. Without exception they want adequate lighting control of temperature, humidity and ventilation. In short, they want physical comfort, including the elimination of distracting noise, achieved preferably with some consideration for attractiveness. Other characteristics which are as varied as they are divergent are not so easily summarized. The needs of students, interns, physicians and research workers present different problems. Certainly the characteristics of the users who come to the library for curricular purposes, for patient care, or for research are not the same.

The housing of the collection furnishes its own peculiar problems. With the emphasis on the use of materials (and these in many forms) with the intermingling of the reader and the materials, with the cry for flexibility for future rearrangements as new needs and uses develop the problem is no longer the simple one of storage stacks. Again, many questions need to be answered For what purpose has the collection been acquired? What kinds of materials make up the collection? Are they only the more conventional types books and periodicals, both bound and unbound? Are they reprints, pamphlets, or photostats? Are they the more troublesome types microfilms, manuscripts, slides, records, and so on? Depending on the library or the type of library the emphasis may be on one kind or another or a combination of many It is obvious that some of these types will require other than the conventional shelving and of course the number in each category will either simplify or complicate the problem. From the following figures it is obvious that the library of a medical school will have to provide more shelving for bound volumes than will that of the library of a pharmaceutical house. From a questionnaire sent out in 1947 by the author it was found that the average holdings of 55 medical school libraries was 41,863 volumes the median, 33,593, with a variation of 8,000 to 151 472. A check list of pharmaceutical libraries published in 1945 (58) showed that the average holdings of 26 such libraries was 4,688 the median, 1,750 with a variation of 200 to 21,000.

Not only is there the problem of types of material with their varying requirements for storage and for use but there is the problem of growth The smaller medical libraries will not have this problem to the degree that

the larger libraries do, but have it they will. Most of the general literature states that libraries double their accessions every sixteen to twenty years over longer periods of time, they increase even more rapidly This rate of growth is comparable in medical libraries. For a specific library or type of library it may be higher From figures published in various editions of the *American Medical Directory* it was found that forty-one libraries of medical schools had averaged an increase in volume of three and a half times in a twenty year period. Certainly then, the minimum allowance would be at least *double* the space needed for storage when the shelves become filled to working capacity

Last to be considered, and all too frequently least, is the staff which must acquire, organize for use, and interpret the collection. As the function of the librarian has changed so has the need for space for him and his staff. But few other than librarians, are aware of this. It is up to the librarian to educate his architectural associates and others who may be concerned with the planning To provide adequate accommodations for the work of the staff, *questions must be asked and answered concerning the work planned* and anticipated. For example, what services will be made available to the user? Circulation only? or the services provided by the Armed Forces Medical Library and the New York Academy of Medicine? Will the acquisition program be extensive, aggressively pursued? by purchase? by gift? by exchange? Another factor to be considered is the growth in number of the staff. It has become almost an axiom that the size of the staff increases proportionately more rapidly than either the collection or the number of patrons.

In achieving the program —a desirable solution to the problem presented by the preceding elements and their involved interrelationships— it is helpful to visit as many libraries as possible as many public places (such as restaurants, stores, banks) *as possible. It is wise to read extensively* In reading the literature, which for the most part has not been written with the medical librarian in mind, one must discriminate as to the pertinent information and must change emphasis on what may be regarded as essential depending on the peculiarities of medical libraries. For example, the space required in the medical library for the card catalog, its growth, and its users will not be the problem that it is in the public, college, or university libraries. On the other hand, because the periodicals are of such importance in the medical library the indexing and abstracting tools to the literature of medicine and its auxiliary sciences will require extensive space carefully planned for convenient and long continued use, strategically placed in relationship to the materials indexed the serial catalog the reference desk or the desk combining this function with circulation in the smaller library

A good introduction to the literature for those not familiar with the field is "Library Planning a Bibliographical Essay in *Planning the university library building* (62) This book plus *Library buildings for library service* (48) will give orientation to the present trends and bibliographies for further investigation Both Lyle (63) and Wilson and Tauber (73) have good summary chapters and extensive bibliographies. In 1951 the Royal Institute of British Architects Library (70) published a bibliography which includes more of the international literature. The contribution of Wheeler and Githens (72) is invaluable. For the larger library Edna Ruth Hanley (53) has a collection of floor plans that are worth studying For the smaller library or specifically the hospital library the Library of the American Hospital Association has plans which should be worth studying Almost any issue of *College and Research Libraries* (68, 69) has at least one article of importance to the planner The files of the *Bulletin of the Medical Library Association* are not so helpful but three articles (46, 47 66) should be mentioned. A search of *Special Libraries* produces some worth while articles (52, 57) Nowhere in the literature have I seen references to a very helpful file—that of *The Pioneer* published by the Library Bureau Division of Remington Rand Each issue is devoted to discussion floor plans, and pictures of a recently completed library or libraries, usually written by the librarian of the institution. James Thayer Gerould's early classic (50) may still be read to advantage. McCrum has a valuable "Alphabetical Check List of Building Requirements." (64 p 138–46) Wheeler and Githens have an equally valuable Checklist of Tests" and "Checklist of Rooms and Services." (72, p 80-81 76–78) Flow charts such as the two, "Flow of Work in an Order Department" and "Flow of Work in a Catalog Department," (48, p 45 49) are exceedingly useful A process chart such as that prepared by Martha Gilbreth (45 p. 110–11) of the Montclair Public Library is also of benefit. A chart or diagram showing traffic is essential. Practically all books on library planning emphasize the importance of a check list of equipment. A particularly helpful list which includes names and addresses of firms is the "Library Buying Guide." (61) A further helpful step is to draw to scale on a copy of the blueprint the pieces of furniture and equipment in their exact locations. As they are ordered the items may be colored, the uncolored ones showing what is yet to be purchased. If any of the old equipment is to be used it should be drawn in and some indication made that it is available. In the preliminary work pieces of furniture cut to scale from heavy paper are a timesaving device. Rather than cutting each individual stack, an easier method is to draw on a strip of paper the correctly scaled stacks with the proper allowance for stack aisles. This is also true of carrels.

While many needed units of measurement have not been established, there are some that are exceedingly useful. Most of the following come from Wheeler and Githens and have been confirmed by others. Those of the book stock have in some cases been modified by a count of the holdings of the A. W. Calhoun Medical Library.

Some Units of Measurement

USERS

30 to 50 per cent of total number of students *(for college and university libraries no figures for medical libraries have been found)*

25 to 30 sq. ft. per reader in reading rooms (a workable figure for the total area, when applied to a particular room apt to prove too low or too high)

15 to 35 sq. ft. per reader in carrels (the smaller figure for unenclosed, the larger for enclosed carrels)

TABLES

Aisles

Between tables, not less than 5 ft.

At table-ends free from chairs, 3 to 4 ft.

Between tables and walls, 3 to 4 ft. (if there is wall shelving, allow another foot)

Dimensions:

36" by 60" (4 readers)

36" by 90" (6 readers)

Circular 48" diameter (4 readers)

Tables for 4 readers are preferred for ordinary use.

STAFF

100 sq. ft. per employee in catalog rooms.

75 sq. ft. per employee in all other work rooms.

15 to 20 per cent of total area should be allowed for staff.

BOOK STOCK

5 volumes per ft. of shelf for books in open reading rooms.

4 volumes per ft. of shelf for periodicals in stacks (an efficient working capacity)

3 to 4 volumes per ft. of shelf for reference tools, such as bibliographies, abstracts, indexes.

10 to 11 volumes per sq. ft. of floor area (an efficient working capacity)

5'6" from center to center of double-faced bookcases open to public.

4'6" from center to center of double-faced bookcases closed to public.

One of the formulas for estimating the amount of space necessary to shelve a required number of volumes is the "cubook," which was worked out by Robert W Henderson (55 56) of the New York Public Library The cubook is a spatial measurement which gives the exact amount of shelf space needed, although only the approximate number of actual volumes. In attempting to use his formulas for estimating stack capacity a count similar to that of Henderson s was made in the A. W Calhoun Medical Library resulting in the figure of 85 books as the average number of volumes shelved per single-faced 3-foot section of standard shelving The application of the formula in ascertaining the number of 3-foot sections needed to shelve 100,000 volumes would be number of volumes (100,000) plus 10 percent (100,000 times 1.11) allowance for end space, divided by the average number of volumes shelved per section (85 medical books) or

$$\frac{100{,}000 \times 1.11}{85} = \frac{111{,}000}{85} = 1{,}305 \text{ sections}$$

In working out desirable space arrangements, Wheeler and Githens again come to the fore (72, p 76)

Each item should be considered as to its necessity location and space, with the understanding that separate rooms are not required for all of them. The more the activities can be grouped together the better for the more the building is divided up by permanent walls or partitions, and the more departments and public rooms added to it, the greater the expense for construction, supervision, and personnel, and the more difficult and expensive to change in the future.

Having decided on all the necessary items, the planner may represent each by a circle. If direct communication is necessary a line is drawn between the circles if not a dotted line. Soon the really vital relationships become apparent and areas or rooms can be worked out to the best advantage of the particular library (72, p 335–36)

No matter how small the library certain areas are essential. Entrance into the library space or reception, information circulation and reference desk may comprise an area and a very small one, but some provision of space must be made. For control and economy it is preferable to have only one public entrance. Areas for the card catalog, for bibliographic tools, for textbooks and monographs, for current periodicals, for back files of periodicals—with adequate space for use—are further minimum essentials. Additional desirable divisions of the textbook and monograph collection would be histories of medicine and biographies, and rare books. Storage

space for less-used materials and for duplicates for exchange is necessary but it need not be in close relationship to any of the public areas. Offices for the librarian, the secretary and space for library supplies might make up one unit. Adequate space for the work of the technical services makes up another unit. Even if the library is small, space must be provided for the various functions involved in acquiring materials—whether by gift, exchange, or purchase their cataloging and classifying, or integration into the collection and their preparation for use. Rest rooms must be provided For the unsightly paraphernalia of cleaning, a janitor's closet is usually necessary

In planning the library all desirable technological engineering advances should be carefully considered and incorporated if the money or the librarian's persuasive ability to get the money permits. New materials and methods of construction, noise control, and inter and intra-library communication are some of these. Modern library illumination and air conditioning are two especially important matters that the librarian must do all in his power to get incorporated in the building The first one, which is an essential in all libraries, should be easier to obtain than the second which in most libraries is still regarded as more desirable than essential. Both for creature comfort and for preservation of material, it is desirable when the materials are rare and difficult to replace, essentiality increases. Introductions to both subjects are included in the references (44 49 54 59 67 71) at the end of this chapter For the most satisfactory solution to the problems of both lighting and air conditioning the librarian should keep in mind that these are in the province of the specialist.

Planning Precepts

Read as much as possible.
See as much as possible.
Hear as much as possible.
Think as much as possible.
Define and re-define the objectives.
Examine and re-examine what is done and what is to be done in the particular library
Question all present routines and procedures. Clarify simplify and streamline.
Count and measure anything that can be counted and measured.
Reduce all of the above to a comprehensive and intelligible program, remembering that for the best and most comfortable fit the pattern should be tailored to the individual need of the particular library
Distribute this program widely for its educational and promotional value and in hope of constructive criticism. Revise when and where necessary

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space for less-used materials and for duplicates for exchange is necessary but it need not be in close relationship to any of the public areas. Offices for the librarian, the secretary and space for library supplies might make up one unit. Adequate space for the work of the technical services makes up another unit. Even if the library is small, space must be provided for the various functions involved in acquiring materials—whether by gift, exchange, or purchase their cataloging and classifying, or integration into the collection and their preparation for use. Rest rooms must be provided For the unsightly paraphernalia of cleaning, a janitor s closet is usually necessary

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Distribute this program widely for its educational and promotional value and in hope of constructive criticism. Revise when and where necessary

Establish friendly cooperative working relations with the architects and the builder just as they already have been established with the dean, or the director or the committee, or the board, and (we hope) a donor

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chapter 5

Acquisition and preservation

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THE VARIOUS TYPES OF MEDICAL LIBRARIES, their collections, characteristics, and problems, especially as these differ from those of general libraries, have been discussed in Chapter 1

It is the purpose of this chapter to present sources, procedures and suggestions for the acquisition of material of all types for medical libraries. The term "medical covers the medical sciences in general attention is given to pharmaceutical, nursing, dental and public health material as well as to medical and biological material. Attention is also given to the preservation of the material acquired. It is hoped that a discussion of that problem will be of service to those who are not familiar with materials and techniques.

Delineation of contents

In any scientific library regardless of size, the number of volumes of periodicals generally exceeds that of books and monographs. It is interesting to note the number of current periodicals received in the various types and sizes of libraries in relation to the total number of volumes in these libraries. The following figures are taken from the *Directory of medical libraries* compiled and published by the Medical Library Association, 1950. Hospital medical libraries of 5,000 to 6,000 volumes received from 95 to 126 current periodicals which pertained to nursing and hospital as well as to medical subjects. Medical society libraries of 30,000 to 40,000 volumes received from 315 to 350 periodicals, largely of a clinical nature. Medical school libraries of from 50,000 to 60,000 volumes varied more widely receiving from 528 to 803. This variation may stem from the inclusion of nursing, pharmacy and dental periodicals. Reference libraries of over 100,000 volumes varied from 795 to 7,248 serials of all kinds received, and their scope is of course unlimited.

Hospital medical libraries

Hospital medical libraries are of several types, depending upon the clientele using them. A non-teaching hospital's medical library is the simplest type possible, since it is designed primarily for the use of staff doctors and not for medical students or nurses. It is doubtful if such a library would contain as many as 5,000 volumes, for it would need only the *Quarterly Cumulative Index Medicus* beginning with 1927 the *Current List of Medical Literature* one loose-leaf system of medicine and one of surgery a few recent textbooks in the general fields of anatomy physiology biochemistry pathology medicine and surgery and at least two textbooks in the specialties, such as obstetrics, gynecology pediatrics, and otolaryngology Monographs on specific subjects would be necessary according to the interests of the staff. Such a library would require subscriptions to at least 25 American periodicals and perhaps two or three British ones to give ideas and developments abroad. Foreign periodicals, especially those in foreign languages, are seldom necessary Nor would many reference books usually be necessary although recent editions of a few medical dictionaries and the latest editions of the *American medical directory* and the *Directory of medical specialists* should be in every library *Public Health Reports* is probably the only document necessary for the collection. The yearbooks on various subjects published by the Year Book Publishers would be helpful because they give abstracts of articles from many periodicals as well as editorial comments. Five years back files of the journals should be sufficient because, in time of acute need, further volumes might be borrowed from the nearest medical library of larger size.

In a teaching hospital the collection must be larger for many more textbooks will be needed by the staff, medical students and nurses. There should be from 1,000 to 1,500 books and about one hundred journal subscriptions with back files for at least ten years—more if space and budget allow More reference books could be included than in a non-teaching hospital library especially in clinical subjects. The size and scope of any hospital medical library will be influenced to a certain extent by its proximity to larger libraries from which it may borrow an isolated library must be more nearly self-sufficient than one in a community which contains other medical libraries.

Medical society libraries

Medical society libraries are used mainly by practicing physicians and therefore should supply material which will be helpful in the everyday practice of medicine and in the writing of papers and presentation of cases

at meetings. Some 350 to 400 periodical subscriptions are recommended, the majority of them American publications. Perhaps fifteen British journals, including the *Medical Journal of Australia*, should be received currently and at least five Scandinavian journals (in which the articles are in either French, German or English with summaries in other languages) The inclusion of French, German, Spanish, Italian and Swiss journals would depend upon the interests of the clientele and their ability to read the languages. The completion of the back files must depend upon the funds available, but complete sets of the most used and more recently established journals should be sought, and at least a thirty year file of the others.

There should be at least three or four textbooks in every major subject, including the latest edition of at least one textbook in each field each year An earlier edition may be discarded when a new one is published except in medicine, surgery and pediatrics, subjects in which it is often desirable to be able to trace the development of techniques and disease concepts. Occasionally it is practical to keep only the first and the latest editions. Most of the books may be of American origin, but significant British textbooks should be included textbooks in foreign languages are rarely necessary It is difficult to generalize about monographs, since so many are produced. Almost the only criteria are the actual needs and the requests received the librarian will have to choose them with care. Outstanding British monographs are necessary but not many in foreign languages should be purchased because practicing physicians usually have little ability or inclination to read them. Supplements to the Scandinavian journals are really monographs and should be included in the subscriptions to those journals. If funds are short, a library can economize on monographs.

It is wise to have a good collection of reference works, since they answer many questions. Most important are systems of medicine, surgery pediatrics, obstetrics and gynecology and books of wide coverage in industrial medicine, ophthalmology laboratory medicine, and history of medicine. Few reference books go completely out of date, for they contain basic material. In connection with these, complete sets of the *Index-Catalogue of the Library of the Surgeon General's Office* the *Index Medicus* the *Quarterly Cumulative Index Medicus* and the *Current List of Medical Literature* should be on file. All reference books mentioned above in connection with hospital medical libraries should be included in medical society libraries.

Few documents, either federal, state, or local, will be of sufficient value to medical society libraries to make their handling and shelving worth while. Local state and city reports are the most used, and complete files

of those should be kept. It might be worth while to keep price lists of federal documents on public health and medicine from which documents meeting specific needs can be ordered. Hospital reports, medical school catalogs, documents other than local, and international congress reports are rarely needed.

Medical school libraries

All the materials which should be collected in the types of libraries already described should also be acquired in medical pharmacy and dental school libraries. In addition, more of every type of material is necessary more textbooks, more monographs, and especially more journals, particularly those in foreign languages. The ability to read French, German, Spanish, Italian and Russian, and the need to consult material in those languages, are more widespread in schools. The librarian should be guided by the needs of the majority of the faculty members in choosing such material. The securing of back files of periodicals, in English or in foreign languages, will depend upon the individual title, the funds and space available, and the demand and the librarian must weigh all these factors. The librarian must exert a balancing influence to prevent the more vociferous departments from building up certain fields at the expense of others.

In medical school libraries it will be found useful to have reports from some of the larger hospitals giving information on their staffs and their work current catalogs of professional schools in this country and abroad theses of its own school many reports of international congresses, especially those in which members of the faculty have participated and other such material requested by the faculty General files of microfilms, photostats, and movies can be built up, but it is usually more satisfactory for each department to keep the material it has requested. A file of all of the reprints of articles by members of the faculty should be maintained.

Reference research, and special types of libraries

A library for groups of doctors or clinics specializing in certain fields, such as the Menninger Clinic in psychiatry requires all the available material in its subject area. More general clinics, such as the Mayo Clinic, have the same type of material as is found in a society library with additional research and reference material. Reference libraries, small in number compared to other types of libraries, contain all kinds of material, especially exhaustive works, complete sets of scientific periodicals in all languages, reference books and originals (including rare books and incunabula) for historical studies. In addition there is much non-book material such as pictures, photographs, coins, stamps, films, slides and museum

pieces. Research institutes have all types of material focussed on the subject matter of their particular field Public health department libraries tend to have very few books, but many files of city county state, and national health reports, as well as related pamphlet material, such as popular health education, social service, nutrition and infant and maternal welfare. Commercial firms, such as pharmaceutical houses, have specialized collections built around the type of product manufactured and determined by the amount of research being carried on.

Budget

Although the making of a budget for a medical library has already been discussed at some length in Chapter 4 a brief review is necessary here. The appropriation may be under the jurisdiction of the librarian alone under the library committee, with recommendations from the librarian under direct control of the organization s governing body or as is sometimes the case in libraries of schools and colleges, it may be part of the general library budget. Other sources of funds may be gifts to the library percentage appropriations from special funds, levies on members, or membership dues in associations of Friends of the Library

Apportionment of funds is made between periodical subscriptions, binding, books, and purchase of back files by the librarian, who alone is completely familiar with the library s needs. The amount for other expenses, such as salaries and supplies, may be stipulated by the library committee or other authority The proportion of the funds used for the various types of material will depend, as has been pointed out, on the needs of the clientele using the library Generally speaking, more will be spent on periodical subscriptions, back files and binding and less for books and monographs, pamphlets, and historical material than in general libraries. Any budget should have a certain amount of flexibility so that the greatest needs are met each year it is the duty of the librarian to see that an over-all balance is maintained.

Periodicals and serials

Selection aids

To assist in the choice of periodicals for first purchase or to build up a current file, several lists of journals in particular fields have been published. It would be very difficult to compile a selected list of medical periodicals that would be universally acceptable, since every library normally should take as many as budget and space will allow and the clientele will usually indicate those which are most necessary The librarian will of

course have to weigh suggestions in relation to actual use and see that some fields are not neglected in favor of others.

Each edition of the *American medical directory* contains a representative list of American journals, which can also be used as a source for order information. For medical school libraries the Medical Library Association has compiled a list of journals most often received. In its suggestions for a hospital medical library (3) the Library and Department of Literary Research of the American College of Surgeons includes a classified list of periodicals, as does a pamphlet published by the Council on Medical Education and Hospitals of the American Medical Association (4) A classified list (9) compiled by the Medical Section of the Library Association (British) includes English and American journals in about equal numbers. The Psychoanalytic Collections Conference has published a list of psychiatric journals (11) which could be useful to general medical libraries as well as to special hospital libraries.

For pharmacy the Committee on Libraries of the American Association of Colleges of Pharmacy has published A Selected List of Modern Scientific Journals." (1) Although not a closely selective list this can serve as a guide, and from it the faculty of a pharmacy school or the users of a pharmaceutical library can make selections. For nursing libraries the bibliography *Books suggested for libraries in schools of nursing* (10) also contains "A List of Periodicals Recommended for a School of Nursing Library" For dental libraries the American Dental Association has *A selected list of dental journals published in the United States* which contains no foreign journals.

Further data on such serials as *Advances Annual reviews* and *Year books* may be found in the Bibliography of this *Handbook* together with information about indexing tools which include lists of periodicals, such as the *Quarterly Cumulative Index Medicus Index-Catalogue of the Library of the Surgeon General's Office Current List of Medical Literature* and *Index to Dental Literature in the English Language* Other lists of new periodicals may be found in *Stechert-Hafner Book News College and Research Libraries UNESCO Bulletin for Libraries* and *Vital Notes on Medical Periodicals*

Criteria for evaluation

Since some of the suggested lists are of considerable length and small libraries cannot have all the journals listed, each periodical considered for addition must be carefully evaluated. There are several factors to be weighed whether the journal is sponsored by a reputable organization whether the publisher is in good standing whether the journal contains

original articles, abstracts, or both. A journal not indexed in any of the current indexes should be questioned, for although useful material may appear in it, generally speaking, the more valuable periodicals are included in standard indexes. Sometimes a journal abstracted or reviewed in other journals need not be subscribed to, since the abstracts contain sufficient material from that journal. A librarian should always ask, "Does this periodical fit the recognized need? Does a new journal fill a gap in the existing literature? One must decide whether the prospective use of the journal will warrant its cost.

The physical make-up of the periodical determines its ease of use and its durability but it is not a basic consideration when deciding whether to subscribe, because the paper composition and printing used today may not be used tomorrow Occasionally the availability of back numbers should be considered, for without back files some periodicals are of little value. It is often difficult to decide upon the desirability of foreign periodicals the obvious but superficial test is whether any of the clientele could read the material if it were at hand As the future growth and use of the library must always be kept in mind, forethought as to future needs is desirable. The basic criteria are, of course, the interest and needs of the clientele. If the demand is great enough, less significant considerations can be waived.

Order Information

In ordering periodicals, very careful consideration must be given to the size of the subscription budget and the relative costs of the periodicals needed. While the most useful journals are wanted first, price may be a de ciding factor Prices vary usually from $6 to $30 or more per year—some journals cost $60, a few $100, and certain extensive periodicals issued in sev eral sections are $250. Although there are many sources of publisher and cost information, it is not always easy to trace periodicals issued by less well-known publishers. The catalogs of subscription agents include the prices and frequency of most journals, but most of them do not indicate publishers. Publishers release catalogs and advertisements at intervals this information is the most complete. Advertisements also appear in other journals. The *Quarterly Cumulative Index Medicus* lists the journals indexed therein, with publishers names and addresses but without prices. The *American medical directory* lists the principal medical journals of the United States, Hawaii, Puerto Rico and Canada, together with the publisher address, date of founding, editor frequency and cost. *Ulrich s Periodicals directory* (7th ed., N.Y Bowker 1953) gives complete trade information and tells where the periodicals are indexed and abstracted. It is a selected list but

it includes most of the important domestic and foreign scientific periodicals. Further data on foreign periodicals is somewhat harder to find. The *Stechert-Hafner Book News* occasionally gives information on new journals and on old ones which have been reestablished American and British agents for foreign journals issue lists and advertisements or notices may be found in other journals. All the selective lists mentioned above include some trade information.

The matter of prices has been touched on, but it is well to emphasize again that scientific periodicals are as a rule very expensive. Prices change, and the librarian must be alert to notice them and make proper adjustment in the following year's budget. Membership in some societies includes reduced subscription rates to their publications. Although discounts may sometimes be obtained from agents, there are several points to be taken into consideration in choosing an agent. Choice should be based on a comparison of (1) the amount of discount allowed, (2) whether or not a fee is charged for the service, (3) whether the postage is paid by the agent or by the receiving library and (4) the speed and thoroughness with which the agent follows through on claims for missing numbers. Publishers as a rule do not allow discounts when subscriptions are placed directly with them.

Order routine

The order routine will depend upon the set-up of the library It is possible to order all periodicals directly from the publishers, but this necessitates a large number of orders, invoices and payments, and is ordinarily more trouble than ordering from one or two agents. It is best to place standing orders with agents so that subscriptions will be renewed promptly In a small library the librarian should place orders, receive invoices, approve them for payment, and carry on necessary correspondence. If regulations require that bids be solicited on orders larger than a certain amount, it is wise to avoid this contingency by using several agents and thus keeping the size of any single order below the total requiring bids otherwise, an unsatisfactory agent may have to be chosen simply on the basis of the allowance of a larger discount. It is also more satisfactory to use one agent for domestic and another for foreign subscriptions.

Many libraries are required to order through central purchasing departments or business managers. This usually slows up all processes and makes for confusion in notation of prices, prompt renewals, changes in publications, and claims. If orders must be placed in this way it is imperative that the librarian include full trade information with each order and indicate with whom the order is to be placed. Some of the agents who

handle domestic subscriptions are Bay State Periodical Service, 18 Tremont St., Boston 18 F W Faxon Co., 83 Francis St., Boston 15 Hanson-Bennett Magazine Agency 180 N Wabash Ave., Chicago 1 Moore-Cottrell Subscription Agencies, Inc., North Cohocton, New York Stechert Hafner Inc., 31 E. 10th St., New York 3. Some of those handling foreign subscriptions are E. G Allen and Son, Ltd., 10, 12 and 14 Grape St., Shaftesbury Ave., London W C. 2 British Book Centre, Inc., 122 E. 55th St., New York 22 Otto Harrassowitz, Beethovenstr 6a, Wiesbaden, Germany Walter J Johnson, Inc., 124 E. 23rd St., New York 10 Lange, Maxwell and Springer Ltd., 41–45 Neal St., London W C. 2 E. Le François, 91 Boulevard St. Germain, Paris 6ᵉ H. K. Lewis and Co., Ltd., 140 Gower St., London W C. 1 Martinus Nijhoff 9 Lange Voorhout, The Hague, Netherlands Stechert Hafner Inc., 31 E. 10th Street, New York 3 B F Stevens and Brown, Ltd., 77–79 Duke St., Grosvenor Sq., London W 1 Swets & Zeitlinger Keizersgracht 471 Amsterdam C, Netherlands.

Want lists and back files

After a periodical subscription list has been instituted, there may be gaps in the files, and it is well for the librarian to make a want list, or list of desiderata, showing what volumes and numbers are lacking in the library This may be used in scanning booksellers lists, publishers advertisements, and library exchange lists for back numbers. For very recent issues it is usually best to try the publisher first. There are many dealers who specialize in handling runs or odd volumes and numbers of scientific periodicals. A dealer should be chosen who can be depended upon to supply collated numbers and volumes, that is, those which are either complete (with indexes for volumes) or which indicate the exact amount of incompleteness. It should be made clear whether volumes are bound or unbound, and, in the case of overseas purchases, whether unbound volumes should be bound abroad where the price is usually lower but the bindings are not as sturdy Transportation charges are usually paid by the library and should be taken into account when the cost is considered. It is not always possible to find the exact runs that are needed, but if a longer run than is wanted is available, the extra volumes may perhaps be disposed of by the library or if a shorter run is offered, further volumes may be picked up at another time or from another dealer As back files are ordinarily quite expensive, careful consideration must be given to the actual need in relation to their cost. Often substantially the same sets are offered by several dealers a comparison of prices and conditions of the sets is then advisable. The dealers nearest at hand should be consulted first, but those whose stocks may be larger should not be overlooked. A few dealers are Abraham's

Magazine Service, 56 E. 13th St., New York 3 G H Arrow 218 S. 4th St., Philadelphia 6 J S Canner and Company 46 Millmont St., Boston 19 Arthur H. Clark Company 1214 So. Brand Blvd., Glendale 4 California Henry George Fiedler 31–33 E. 10th St., New York 3 International Art and Science Book Company 192 Broadway New York 38 Walter J Johnson, Inc., 125 E. 23rd St., New York 10 Fred B Rothman and Company 200 Canal St., New York 13 Stechert Hafner 31 E. 10th St., New York 3 Swets & Zeitlinger Keizersgracht 471 Amsterdam C, Holland Zeitlin and Ver Brugge, 815 N LaCienega Blvd., Los Angeles 46, California.

Textbooks and monographs

Selection aids

The principles governing the selection of textbooks, monographs, and reference books are similar to those for periodicals. The most obvious guides are the requests from the users of the library especially members of library committees or boards, faculty and heads of divisions. "Over the counter requests, however should not be the only factor governing the purchase of books the librarian can best judge the weak places in the collection by the number and character of the unfilled requests, and can keep a proper balance in the collection. In college and university libraries it is imperative to have on hand the books assigned for collateral reading and, usually text books used in classes.

There are a number of basic lists of books, as there are of periodicals, for various types of libraries. The Medical Library Association s Committee on Standards for Medical School Libraries has compiled a list of recommended monographs and textbooks which the individual librarian can amend for specific needs. The hospital library guides offered by the American Medical Association (4) the (British) Library Association (9) and the American College of Surgeons (3) include lists of books as well as periodicals. A carefully selected list of new books for the general practitioner appeared in the spring of 1953 (12) The Committee on Libraries of the American Association of Colleges of Pharmacy has published a list of suggested books (2) which gives authors, titles, dates, and publishers, but not prices. The National League of Nursing Education s *Books suggested for libraries in schools of nursing* (10) a long, non-selective list, would serve as a basis for building up a nursing school library While not selective, the *List of books and package libraries for dentists (1942–1951)* issued by the Bureau of Library and Indexing Service of the American Dental Association, might be used as a guide to new books. The Bibliography of

this *Handbook* gives full information about the chief reference books for medical libraries. It is a helpful guide, even though it is too comprehensive to use as a suggested list, especially for a small or medium-sized library. A selected list of reference books compiled by Charlotte Kenton of the Reference Section of the Armed Forces Medical Library has proven to be valuable for a small medical library (8). Copies of the list may be secured by applying to the Armed Forces Medical Library.

Many libraries publish lists of their new acquisitions which are useful for purposes of selection or for comparison. A few libraries which issue such lists are: College of Physicians of Philadelphia, College of Physicians and Surgeons, Columbia University, Medical Society of the County of Kings (Brooklyn), New York Academy of Medicine, Northwestern University School of Medicine, and Yale Medical Library. By consulting the *Directory of medical libraries belonging to the Medical Library Association* the librarian can ascertain which libraries are comparable in use and size with his own. In most instances, those which issue lists of their periodicals and new books will send them on request.

Criteria for evaluation

There are a number of criteria by which to judge the merits of a book considered for purchase. First should come the reputation and background of the author, some insight into which can be obtained by consulting medical directories and periodical indexes for biographic and professional data. The scope of the book should then be considered. Next the librarian should ask himself whether the material is timely or is out of date and superseded by periodical material. The date of publication and the edition number should be checked to avoid mistaking reprints for new editions. A book published by a scientific publishing house can usually be relied upon. The names of the prominent medical publishers may be found each year in the issue of the *Journal of the American Medical Association* which contains the announcements for the Association's annual meeting. They are listed under "Books" in the Technical Exposition section. Books released by general publishers should be scrutinized more closely than those of established medical publishers. The point of view of the book—whether it is designed for the specialist, the general practitioner, the nurse or pharmacist, or the student—will help to determine whether or not it ought to be added to the collection. The desired proportion of textbooks, monographs and reference books in a library, coupled with the calls for material which could not be supplied, will give some idea of what books should be purchased. Reviews are sometimes helpful in gauging value, especially when they appear in journals whose editors can be relied on for fair judg

ment. Unfortunately most reviewers are influenced by their knowledge of the author of the book and their agreement or disagreement with his conclusions; awareness of this fact will help one to evaluate the review. Research groups, institutions, and governmental or military agencies publish works on specific projects, and these will usually be needed, regardless of the authors or individual subjects.

The number and types of nonmedical books desirable in a medical library depend upon its clientele and use. Histories and biographies should be kept if they are gifts, but the librarian should seek guidance in buying them. The Bibliography of this *Handbook* furnishes lists of historical material from which selections can be made, and reviews in scientific journals may indicate the value of current biographies, histories, and reprints of early works. Novels, poetry, drama, essays and criticism by or about doctors make interesting reading, and are suitable for purchase if the library offers materials for leisure time reading and has the money to spend for that purpose. Incunabula and rare books seldom find their way into the smaller libraries, except by gift or good fortune. If advice on values is needed, Chapter 12 of this *Handbook* will be helpful. Many libraries feel the necessity of having a good deal of material on social medicine and medical economics. While there is no specific guide to materials on these subjects, lists of references at the ends of articles may be of use.

Sources of trade information

Regardless of the procedure used in ordering books, complete trade information must be supplied. Publishers' advertisements and catalogs are the most obvious sources of such information. The latter are usually willingly supplied. As mentioned above, medical publishers' names and addresses may be found in the annual conference number of the *Journal of the American Medical Association* or in the *Quarterly Cumulative Index Medicus*. Among the many sources of complete trade information are the *Cumulative Book Index*, the *Publishers trade list annual* and its index, *Books in print* and *Scientific medical and technical books published in the United States 1930–1944* (1946) with supplements for 1945–1948 and 1949–1952. These are not usually necessary in small libraries, but should be available in larger ones. If necessary they may be consulted in a nearby general library. There are lists of books received in such journals as the *New England Journal of Medicine*, *Journal of the American Medical Association*, *British Medical Bulletin*, *Science*, *Nature*, *Science News Letter*, *Stechert Hafner Book News* (for foreign books) and *Publishers' Weekly*. Publishers' advertisements in journals give data about books, but they do not always indicate the dates of the books advertised. The *Quarterly Cumu*

lative Index Medicus gives necessary information about books published during the time covered by the volume. Published acquisition lists of libraries are more useful for help in selection than in ordering, because they may omit some of the necessary data.

Order routine

A regular routine for ordering books should be established, and adequate but not cumbersome records maintained. Much information can be kept on one card Library Bureau or Gaylord order card forms may be used. The name of the person who suggested the purchase should be entered on this card so that he can be notified upon the arrival of the book. If requisition forms must be used for the actual order the cards will still be found useful. Orders for books may be placed directly with the publishers, but this entails a multiplicity of orders, invoices, and payments, and does not always make for fast and cheap service. The easiest and usually the most satisfactory method of ordering is through a local agent who will give a discount, will search for items, and will take the burden of many details off the librarian s shoulders. If all orders must go through an institutional business office or purchasing department, the complete data as well as the sources from which to order the material must be indicated on the requisition forms. It is sometimes possible to make arrangements with dealers whereby all new books or a selection from them will be sent on approval as they appear This is advantageous because it allows one to judge their contents before buying but before signing a contract, the details of this routine should be worked out completely

The librarian should approve all bills for payment, but unless the library is small or its arrangements very simple the actual payment is ordinarily made by the organization s business office.

Government documents

Federal, state, and local documents may be of use in any library but indiscriminate acquisition of them, either by gift or order can lead to many difficulties. In their selection three considerations must be kept in mind first, what use will be made of them second, how much storage space is available and third, how much time and ingenuity will be required in cataloging and handling them, since they appear in all sorts of forms, from very small leaflets to large bound volumes. Libraries which are part of large institutional depository libraries for federal and perhaps state documents will receive floods of material and means must be devised for making use of as much of it as possible. Smaller libraries should choose only what will be most helpful to them.

The World Health Organization issues various serials, monographs, and pamphlets which are particularly important for a public health collection. They may be bought individually or block subscriptions can be had, costing $55 or $100 a year according to inclusiveness. The small general library may be able to subscribe only to the *Chronicle* and the *Organization Bulletin* by which it may keep informed of the Organization's activities.

The *Monthly Catalog of United States Government Publications* is a fairly complete list of all federal documents, and is the most valuable key to such material. At three dollars a year almost any library can afford to have it. It indicates the price of all documents and the classification numbers to be used in ordering and in arranging them on the shelves. Free material may be secured by requesting it from the issuing agency priced material must be paid for either by a deposit account, by check in advance, or by five-cent coupons which may be secured from the Superintendent of Documents, from whom the material must be ordered. Individual classified price lists are issued on subjects such as health and diseases. Most libraries believe it advisable to have at least the *Public Health Reports* which costs $4.25 a year and the *Armed Forces Medical Journal* which costs $5.25 Many libraries will find it necessary to have most of the publications of the Public Health Service, some of those of the Atomic Energy Commission, especially the *Nuclear Science Abstracts* and those of the Medical and Surgical Bureau of the Navy For further information about government documents, the reader is referred to Boyd's *United States Government publications* (7) and to the Bibliography of this *Handbook*

State, county and municipal documents as a rule may be secured gratis. Health reports and vital statistics reports are usually the most useful of these documents. The Library of Congress's *Monthly Checklist of State Publications* will usually show what is available in state documents, but as a rule a small library will need only the publications of the State in which it is located.

Reports of international congresses

Though they often contain important material, reports of international congresses are rarely called for in small libraries. They are usually difficult to locate and secure, and detailed cataloging is required to make their information available. Some of them are published as supplements to periodicals in their fields, in which case information on how they may be secured may sometimes be found in the periodicals. For bibliographies of congress reports see the Bibliography in this *Handbook*

Organizational publications, miscellanea

Much material that does not fall into any of the above categories may be useful to any library Countless organizations issue publications, such as special reports, bulletins, annual reports, and news notes, many of which are worth securing and cataloging, and most of which may be had free. Examples are the *Statistical Bulletin* of the Metropolitan Life Insurance Company bulletins (under various names) of the major pharmaceutical houses, *Cancer News* of the American Cancer Society collected reprints from the National Foundation for Infantile Paralysis, *Tic* and *Cal* from dental laboratories, and *The American Heart* from the American Heart Association. The National League for Nursing publishes a great deal of material which is available at small cost. The amount of this type of material which should be secured and kept in a small library depends entirely upon its usefulness, but the librarian should be aware of its existence. Similar information concerning pamphlet material will be found in Chapter 8.

Annual or more frequently issued reports of hospitals, state institutions, clinics, city county and state medical, dental, pharmaceutical and nursing societies may contain valuable information, such as names of staffs or officers, lists of members, programs of special meetings, and abstracts of papers and short original articles. One specific use for these reports is to trace doctors who have moved since the latest *American medical directory* was published or to verify staff appointments. Bulletins from other societies are also useful for comparison with locally published bulletins. Annual reports of medical libraries are interesting for the same reason and, in addition, often contain instructive material for the librarian. However the small library will need very little of this kind of material.

College libraries will find it helpful to keep on file the catalogs of other medical, dental, pharmacy and nursing schools. These may usually be secured free, although there is sometimes a small fee. In small libraries only the latest catalog should be kept.

Many biographic and other directories are available the most necessary ones are the *American medical directory* (published every two years by the American Medical Association) the *Directory of medical specialists* (published for the Advisory Board for Medical Specialists by the A. N Marquis Company) *American men of science* (published at irregular intervals by the Science Press) and the *American dental directory* (published by the American Dental Association) The special supplement to *Hospitals* called the "Administrator's guide" gives a list of hospitals in the United States with details of facilities and expenses for each, information about the American Hospital Association and its members, and other in-

formation of use to hospitals. The *Medical directory* is valuable for inquiries concerning names and addresses of British physicians. Certain societies, such as the American College of Surgeons, American College of Physicians, and American Psychiatric Association, publish lists of members which may be had on application, though not all are free. Earlier editions of all the directories may possibly be discarded when a new one appears, but for occasional tracing of individuals it may be well to keep all editions of the *American medical directory*

The ordering and handling of pamphlets, ephemeral and free material, and pictures are taken up in Chapter 8 of this *Handbook* Slides, films, microfilms and microcards are discussed in Chapter 9

Exchanges

Exchanges are fruitful sources of material. If the library s institution has a publication of its own, direct exchange with many other institutions may often be arranged. These exchanges may include school bulletins, house organs, state, county and city medical and dental society bulletins and journals, and hospital and clinic bulletins. Usually exchanges can be arranged only with publications of the same type as offered (i.e., first class journals with first class journals, house organs with house organs, society bulletins with society bulletins) In other words, the exchange should be approximately even. However any library should consider carefully what it has to offer and try to get the best exchanges possible. Material available by exchange may not necessarily be desirable, and unless it is, it should not be sought.

The Medical Library Association Exchange is a medium through which a tremendous amount of material is made available to members of the Association. Every year thousands of duplicate numbers and volumes of journals and a smaller number of books find useful placement through this procedure, and it is often possible to fill wants which cannot be supplied through publishers or dealers. The only cost is that of transportation. To make full use of the resources offered and to ease the task of checking, the library s want list should be kept up to date. All lists of offerings are sent to the Manager of the Exchange, and all assignments of material are made by the Manager Further description of the Exchange will be found in Chapter 2.

Groups of libraries often compile local exchange lists of material not worth including in or not requested from their lists submitted to the Exchange. Close cooperation between libraries in the same vicinity is advantageous in this as in many other respects.

The United States Book Exchange, inaugurated in 1949 is a central

depot into which libraries here and abroad can pour their surplus material and from which they can secure many publications they need. Sponsored by twelve national library associations, the four learned councils, the Engineers Joint Council, the Smithsonian Institution, and the Library of Congress, the Exchange has an office in the Library of Congress to which material and requests are sent. Until 1952 a Rockefeller Foundation grant assisted in the work and paid the expenses for foreign libraries. Up to that time 388 foreign and 274 North American libraries had participated. All that is required of a library is that it offer an equal number of duplicates in return for those it receives, and, in addition, the payment of shipping charges and a nominal fee for service (6) Members of the Medical Library Association normally use the United States Book Exchange only for material not wanted by the Association's own Exchange, and only in response to specific requests on behalf of devastated or newly established libraries abroad, such as, in recent years, the University of Chile, the Medical School library in Honduras, Makerere Medical College Library in Uganda, and Japanese medical libraries designated by the Japanese Council on Medical Education.

Gifts

The librarian must always be alert to possibilities of securing gifts for the library and must act on them or pass them along to the proper agency Overlapping of solicitation of gifts should be avoided by a definite understanding in specific cases on who should do the asking the librarian, a member of the staff or a central agency The enclosure of a blank form for bequests in a publication of an institution is an allowable reminder that the library will accept gifts of money and books. Copies of such a form should always be on hand Notices of particular or continued need placed in bulletins, journals and newsletters are not amiss. Sometimes special societies may be interested in providing books on a particular subject or date, or individuals who might be especially concerned may be asked to contribute the purchase price of especially expensive books. All gifts should be accepted with an understanding as to their disposition that gifts of money may be used either for a specific purpose or left to the discretion of the librarian that books donated may be kept, discarded or sold, according to the needs of the library and shelved where they will do the most good, not necessarily together

Memorial collections are a welcome source of material for a library A large gift of books may form a nucleus for the entire library If a substantial sum of money is given—enough for the upkeep or partial upkeep of the library—the library may be named after the person honored. How

ever in the case of publicly supported libraries, naming the library for an individual donor may impair the receipt of future funds. In that case, naming the building or a part of the collection or building would be better Sometimes a specific collection, as one on history may be provided by gift and named for the donor

Support of a library may come from groups organized for that purpose, such as Friends or Associates of the Library an alumni association, or members of designated library associations. The organization of a Friends of the Library group might be accomplished as suggested for the Armed Forces Medical Library and described in the *Armed Forces Medical Library News* (5) Dues might be set at five dollars or more for libraries with less national interest than the Armed Forces Medical Library

Great care must be used in acknowledging all gifts, and it is most important that this be done by letter or form even if oral acknowledgment is also made. A further printed record in annual reports or notices in commencement programs or other publications assures the donor that his gift was appreciated. Library committees should be informed of gifts so that the members may reenforce the library's thanks in case they know the donors, and so that they will be aware of what comes into the library Displays are a gratifying way of calling attention not only to the value and interest of gifts, but to the generosity of the donor Bookplates identify gifts and all books given should contain these, showing either the donor's name or that they are part of a special collection.

Book repair binding and preservation

Many articles and books have been written on the subject of the binding and care of books, some of which describe in detail the techniques of repair (14 17 21, 22) and the preparation of books and periodicals for binding (15) and the reader is referred to them for instruction beyond the scope of the simple repairs presented here. The handling of pamphlets and small booklets is considered in Chapter 8.

Repair

The following outline of the procedure used by the Library of the New York Academy of Medicine, prepared by Anastasia Dalton, is given as a suggested method of repairing cloth-bound books

Cover on spine torn or cracked. Place strip of Mystik Tape or Book-aid Tape of required width on back, extending it over the ends just long enough to cover the back, and turn in. Both tapes may be purchased in a variety of widths and colors. (Mystik Tape, obtainable from Mystik Adhesive Products, 2668 N Kildare, Chicago 39 Ill., Book-aid Tape, obtainable from

Bro-Dart Library Service, 59 E. Alpine St., Newark, N J) Letter call numbers, author and title on back.

Covers off. Place book tightly in book clamp. Apply a coat of plastic glue to spine. (Liqui-Plastic Glue, obtainable from Wellman Products Co., 1444 E. 48th St., Cleveland 3 Ohio Magic Mend, obtainable from Gaylord Bros., Syracuse, N Y., or Stockton, Calif. Norbond, obtainable from Demco Library Supplies, Madison, Wis. or New Haven, Conn.) To this apply a strip of crash or super the length of the spine, but extending one inch beyond it along each side· let dry Apply the covers to the free one-inch strip of crash or super (on the *inside* of each cover) with the glue and let dry in the press, putting a strip of oiled paper between the cover and the body of the book to prevent sticking Fasten in new end papers to cover raw super and boards. Apply Mystik or Book-aid Tape to cover spine and proceed as above.

Spine broken and/or signatures loose. Make sure the pages are all in order then shape the book into its proper form and clamp it tightly into the press. Apply a coat of plastic glue to spine and let dry Apply a strip of crash or super to spine with another coat of glue, and proceed as above.

Torn pages. Do *not* use cellulose or paper tape (it dries, curls, and sometimes discolors the paper) Touch both edges all along the tear with a *small* amount of library paste or glue place them in the desired juxtaposition, cover each side with a strip of rag tissue paper and press between two sheets of oiled paper till dry Remove tissue paper leaving torn edges securely together

Loose pages. Touch the length of the inner edge with a *small* amount of paste or glue, adjust page into proper position in the book, put in press, and let dry If page projects beyond the rest, trim it off.

An experienced bookmender can repair an ordinary book which has loose signatures or covers in three-quarters of an hour this process is much cheaper than rebinding. More detailed instructions on specific mending materials are furnished by the manufacturers. Booklets giving general instructions on repair are available from some of the supply houses for example, "Bookcraft from Gaylord Brothers and "Mending Manual" from Demco. Two practical articles on simple rehabilitation of damaged books are by Browning (13) and Garton (18) Leather bindings may be repaired with such materials as Liquick Leather (obtainable from Liquick Leather 32 Hawley St., Boston 10, or from Goodspeed's Book Shop Inc., 18 Beacon St Boston 8)

Preservation

The preservation of bindings presents various problems, depending upon atmospheric, geographic and housing conditions. The most prevalent enemy of books is dry heat. Twenty-four hour air-conditioning, with even temperatures (65–70) and humidity (50–65 per cent) the year round, would be Utopia. In some parts of the country the danger is from too much humidity which favors the growth of mold. Hetherington (19) reports that at Duke University Hospital Library a solution of thymol crystals (100 grams) mercuric chloride (4 grams) ether (200 cc.) and benzene (400 cc.) is used to treat the books Tulane University School of Medicine Library uses a solution of two ounces of mercuric chloride in one pint of 95 per cent alcohol. This solution when applied to cloth bindings with a cloth kills a present growth of mold and prevents recurrence. Gas, smoke, worms and roaches are other dangers to books, as are strong sunlight, dust, and soot. Reasonably tight and clean stack rooms will help preserve bindings but certain preparations can be used to prevent deterioration. Buckram and cloth bindings may be sprayed or brushed with lacquer to make them impervious, or a special thin varnish may be applied If they are dirty 2 teaspoons of vinegar in 8 ounces of cool water applied with cheesecloth will clean them. After drying, they may be lacquered. A fascinating account of the battle with bookworms and the final weapon used against them in the Huntington Library is given by Iiams (20) No generalizations can be made upon the salvage of books after water soaking, as each situation has its own solution. Reports may be found by reference to the *Readers Guide* The general procedure is (1) to stand the books on end with leaves separated and exposed to dry heat until partially dry (2) to interleave them with waxed paper so that the pages will not stick together and (3) to put them in presses so that they will not bulge out of shape.

A number of preparations may be used on leather bindings to preserve and, to a certain extent, rehabilitate them. The History of Medicine Division of the Armed Forces Medical Library reports that a solution described by Plenderleith (23) will preserve leather indefinitely if applied once before it has begun to crumble. The New York Public Library has developed an excellent leather preservative which may be secured from the Haas Pharmacy 376 Park Ave., New York 22, for $3.50 a pound. "Preparation 6" of the Department of Agriculture (16) is the favorite of many libraries throughout the country This consists of 40 per cent anhydrous lanolin and 60 per cent pure neat's-foot oil (20 C. cold test) It may be applied with a brush. There are several commercial preparations, such as Leather Vita, Morocco Cream, Lucelline,

Leth-o-creme, and Barco, which may be purchased and applied as directed, although the author has had no proof of the reliability of any but the first two products. After the books have been washed and dried, the preservative must be applied to the leather without touching the paper linings the books must be allowed to stand open and separated until the leather is dry and then rubbed and polished completely dry Small libraries may not have many leather-bound books, but it is wise to take proper care of any worth saving A word of warning should be inserted here against allowing anyone but an experienced binder to undertake the repair of rare and valuable books. Sometimes it is best to put such books into slip-cases without attempting repair

Supplies

Materials and supplies for the mending, binding, and rebinding of books may be secured from the dealers in library supplies, such as Bro-Dart Library Service, 59 E. Alpine St., Newark, N J Demco Library Supplies, 110 S Carroll St., Madison, Wis., and New Haven 2, Conn. Gaylord Bros., Inc., Syracuse, N Y., and Stockton, Calif. Library Bureau of Remington Rand, 315 Fourth Ave., New York 10, or the nearest branch office Library Efficiency Corporation, 36 W 20th St., New York 11 It is advisable to keep on hand up-to-date catalogs from all of these suppliers for purposes of comparison and prompt choice of desired items.

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chapter 6

Classification

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General principles

CLASSIFICATION is essentially the grouping of ideas or objects by a common denominator The science of classification has led to the compilation of a number of basic principles the various ways in which these are applied and qualified have resulted in the variety of classification schemes prevalent today A good scheme of classification must be applicable alike to text books, monographs, pamphlets, and the other items in a collection what ever their nature. It must be sufficiently simple to be easily understandable, and at the same time capable of expansion to cover the ever-broadening fields of knowledge. Its divisions and subdivisions should be logical in development from the general to the specific. Its plan of notation must be easy to read, write, and understand and above all must be practical in use as well as in theory The choice of a classification system which is capable of expansion from the simple form needed for the small collection to the more complicated scheme needed for the larger library therefore, requires careful consideration and decision.

Classification and reclassification

Classification schemes are subject to revision, providing for changes in established subject concepts and for developments in new fields. There fore reclassification of some type is being carried out in every live book collection. The technique for carrying through a reclassification program varies, depending on whether it consists of a complete change-over from one scheme to a totally different one, the modernization or expansion of special sections in an existing scheme without reassignment of old numbers for new concepts, or adaptation of a new scheme, superimposed on the

existing classification for material published after a specific date. Consideration must also be given to the size of the book collection and the experience and availability of the staff responsible for the project.

Reclassification need not be considered as a desperate, defiant operation. It is a costly procedure at best and the decision to undertake a major reclassification program should be based on nothing less than complete inadequacy of the one in use. It has been found that open or closed-stack policies have a strong influence on the appraisal of classifications in use. In an open stack collection more emphasis is placed on such elements as order of subject relationships, classification of different aspects of a subject together and detailed subject development. In closed-stack collections the emphasis is on broad subject classification the order of subject relationships tends to follow more general treatment, and the dispersal of different aspects of a subject under major fields rather than under specific units causes little concern. It is of interest to note that one library using the Library of Congress classification system and serving clinicians as well as students and research men, was constantly on the defensive because all aspects of a subject were not together as the clinician would have desired. Today this library s service has changed, being limited to student and faculty use, and the clientele is no longer critical of the classification pattern seeming to be satisfied with the Library of Congress arrangement. Thus in considering reclassification the librarian needs to control his perfectionist urges, make sure his current system is really in need of major changes before attempting to revise it, and refuse to adopt an apologetic attitude toward his own scheme as long as it meets the needs of his particular collection.

Author tables

A number of devices have been formulated to arrange books alphabetically within a class, the best known being the Cutter tables (12–14) and the Library of Congress simplified alphabetic table (42) The Cutter tables provide an alphabetic pattern of letter combinations accompanied by numeral sequences based on decimal figures. The Library of Congress table provides a formula for a simple notation based on words beginning with a vowel and those beginning with a consonant. The Shelflisting Section formulates all the author notations and the A Z arrangements for the classified material from the following table [1]

For words beginning with vowels followed by

Consonants	b	d	l	m,n	p	r	s,t
Number is	2	3	4	5	6	7	8

[1] Reproduced with the kind permission of the Library of Congress.

For words beginning with consonants followed by

Vowels (or r)	a	e	i	o	r	u	y
Number is	3	4	5	6	7	8	9

Example:	Osler	O8
	Williams	W5
	Williamson	W54
	Xavier	X3

Application to medical collections

The general classification schemes were planned to cover the whole field of knowledge in the days before the development of large special libraries devoted to one subject. Use of a general classification system in a library whose subject matter is of limited scope must of necessity entail long and complicated classification symbols, since the new scheme has to become an elaborate expansion within the limits of a restricted section, leaving the greater part of the original general system of notation unused. Then, too, the special field may have grown so rapidly and so extensively that the divisions assigned in the general schemes of classification have proved inadequate and require further expansion and subdivision. The medical sections of the general schemes as well as a number of special schemes for the classification of medical libraries are briefly discussed here. The purposes of this discussion are to summarize the concepts of classification which are essential for an orderly arrangement of material to indicate the basic pattern of general and special classification schemes now used for literature in the fields of pre-clinical science, medicine and its specialties, dentistry pharmacy and nursing and to emphasize the elements to be considered in the selection or the modification of a classification system.

The successful application of a classification system is influenced by four elements type and size of library service policies subject emphasis changing concepts in subject relations. The selection of a classification is not made on the basis of which is the most widely used, the most recently compiled, or the most familiar The choice should be based on the subject emphasis and shelf arrangement best suited to the type of service the library renders and the clientele it reaches. A scheme is to be preferred that can be adapted to these needs, that allows for expansion and insertion of new fields without overhauling the complete classification structure or lends itself equally well to simplification without loss of logical subject relationships, and whose notation is easy for the patron to copy and easy to read on the shelves.

In a medical library disease in all its aspects forms the greater part of the subject matter and as a result systems of nosology or the classification

of disease, have served as guides in the formation of schemes for classification of books. These systems have been based on symptoms, on anatomic structures, and on the etiology of disease. The classification of disease jointly based on symptoms and on anatomic structures proved to be the most practical method, and early in the nineteenth century William Farr of the Registrar-General's Office in England, devised a logical plan for the uniform classification of diseases and causes of death to be used in the scientific interpretation of registration statistics (17–18). This plan formed the basis for the present *Manual of the international statistical classification of diseases, injuries and causes of death* (43) as well as for the Royal College of Physicians *Nomenclature* (34). Thus a uniform nomenclature and a standard classification of disease along anatomic lines have been established, with diseases grouped also under general diseases (those affecting the whole body rather than any special part) and local diseases (those affecting only a particular part of the body).

John S. Billings, when arranging the outline of classification for the *Index Medicus*, followed this plan but changed it to conform to the more comprehensive demands of medical bibliography. The revision of the classification list of the Royal College of Physicians of London in 1885 showed many expansions which were in turn incorporated into Billings' outline (5). This second outline has been generally followed in subsequent classifications planned for medical libraries, with the exception of the Cunningham (10), Barnard (3–4) and Army Medical Library (37–38) classifications.

General classification systems

In the discussion which follows, the sections devoted to medicine in the general classification schemes—namely the Dewey Decimal classification, Library of Congress classification, Colon classification, Bliss classification, and Universal Decimal classification—are briefly delineated. Following these the special schemes devised for the classification of libraries devoted strictly to medicine and its related subjects are described. A short list of libraries is appended to each classification as an example of the types of collections to which the scheme has been applied. Certain advantages and disadvantages are noted in each case and comparisons between the respective systems are made at the end of the chapter.

Dewey Decimal classification

The use of this decimal system (15–16), covering the entire field of knowledge as it does, is confined in a special library to a comparatively small portion of the general plan of notation, and the resulting classifica-

tion numbers, through subdividing decimals, are long and cumbersome. In preclinical fields of medicine, such as anatomy and physiology the scheme is developed in minute detail in the clinical fields, on the other hand, it is not sufficiently inclusive to provide for the advances and changing ideas of medical knowledge. Two editions of this classification, the fourteenth and fifteenth, have been issued in the past ten years. The fourteenth edition, though greatly expanded from the thirteenth, still fails to meet the needs of specialized medical collections. Medical libraries using this system report that the fourteenth edition does not provide sufficiently for expansion and revision of those divisions which have shown marked development and change during recent years namely bacteriology biologic chemistry pharmacology therapeutics, endocrinology medical economics, industrial, socialized and aviation medicine, dentistry nursing, and pediatrics. The Relativ Subject Index is most inclusive and adds greatly to any usefulness the scheme offers to special collections. The fifteenth edition (16) with modern terminology and realigned and simplified schedules, has proved equally disappointing from the standpoint of usefulness in a highly specialized subject field. It has been oversimplified, both in the tables and in the index, to such an extent that its value even as a reference classification tool has been impaired. A service bulletin (41) containing current additions and changes for these editions is issued at regular intervals. The classification of diseases in the fourteenth and the fifteenth editions follows the outlines given below [a]

14th edition

616 Pathology Diseases Treatment
- .1 Diseases of circulatory system
- .2 Diseases of respiratory system
- .3 Diseases of the digestiv system
- .4 Diseases of the lymfatic system and ductless glands
- .5 Dermatology Skin diseases
- .6 Diseases of genito-urinary system
- .7 Diseases of organs of locomotion
- .8 Diseases of nervous sistem Psychiatry
- .9 General diseases
  - .91 Infectious diseases
  - .92 Other fevers General works on fevers
  - .93 Diftheria Cholera Malarial fever
  - .94 Septic diseases

[a] Reproduced with the kind permission of the Lake Placid Club Education Foundation, owners of copyright of the *Dewey Decimal Classification*. Form, wording and spelling in classification tables are given throughout this chapter exactly as in the original.

952–954	Geriatrics.
955–958	Arctic medicine.
960–962	Tropical medicine.
963–969	Industrial medicine. Industrial hygiene.
970–971	Military medicine.
981–986	Naval medicine. Including merchant marine.
1000–1005	Submarine medicine.
1050–1097	Aviation medicine.

The recent revision of the R schedule is an outstanding example of the adaptability of this classification.[4] It is especially noteworthy that expansions, realignment of topics, and combination of minor subject aspects have been carried through without radically changing the entire pattern. Changes in terminology are reflected in new topic headings and modification of old ones, in the modernization of disease nomenclature, and in the ethnic, racial and geographic terms. Changes in clinical interrelationships and broad etiologic concepts of diseases (44) are evidenced in the reorganization and realignment of pathologic conditions. Changes in the fields of surgery and therapy are apparent in the regrouping of specialties and in the development of new trends. The amount of revision and expansion varies in each section its character has been governed by the literature within each subject area. The fields of Public aspects of medicine (RA) International medicine (RC) Surgery (RD) Pediatrics (RJ) Therapeutics, Pharmacology (RM) and Nursing (RT) have been revised to meet modern needs as well as provide for future developments as far as practical. Especially commendable is provision, in the R schedule, for clinical concepts of subjects not previously stressed, such as Disorders of character due to sexual deviations (RC544) formerly classified in HQ Sex relations Diet in control of weight (RM222) previously allocated to TX, Dietary studies Exercise and special methods (RM725–727) heretofore assigned to GV Gymnastics. The index to this schedule is an extensive one which includes the indirect as well as the direct topic headings, a boon and time-saver to the user The fact that a list of current changes and additions in classifications, as well as in subject headings, is also available adds to its value for special collections.

Since this revised edition is recent, a critical appraisal cannot be made until the schedule has been subjected to actual use For the general medical library it should prove to be more than adequate more detailed expansions

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Mrs. Sarah O. Mayer Senior Subject Cataloger in Science, Library of Congress, compiled this revision of Class R in collaboration with medical specialists and librarians.

will be necessary to meet the requirements of libraries in special fields such as dentistry and pharmacy Such revisions or expansions can be made by individual libraries in accordance with the requirements of their book collections.

Some of the medical libraries using this scheme in whole or in part are the Welch Medical Library Johns Hopkins University Baltimore the Lane Medical Library San Francisco the library of the U S. National Institutes of Health, Bethesda, Maryland the Bio-Medical Libraries, University of Chicago the Medical School Library University of Oregon, Portland the Medical School Library Wayne University Detroit the Medical Library Western Ontario University London.

Colon classification

S. R. Ranganathan, eminent Indian scholar and librarian, compiled the first edition of the Colon classification in 1933. Its development is based on his premise, "Practically every law of Library Science demands that the classification should be as minute as possible " He states "Colon notation furnishes a method for the individualisation of subjects to a degree that is not possible with the bare Decimal Notation "

The third edition, 1950 (31) contains four parts rules of classification, schedules of classification, index to the schedules, schedules of the classics. The section devoted to rules incorporates types of subdivision (e.g form, geographic, language, chronologic) as well as devices and symbols used for designating specific relationships within a class number The sparseness of some of the directives and the unusual terminology allotted to certain formulative concepts (e.g., facets" and foci") make these rules difficult to interpret without reference to Ranganathan s other library textbooks, such as his *Prolegomena to library classification* (33) and *Library classification* (32)

The notation for the main classes of the Colon classification consists of arabic numerals 1–10 capital letters of the English alphabet, in combination with numerals and lower case letters as needed and the Greek letter Δ The use of symbols, such as the point, the colon, and the hyphen, forms the central motif by which extensive interrelationships may be indicated. The sequence of subjects is marked by four divisions Generalia (1–9) Sciences (A–M) Spiritual experience and mysticism Δ Humanities (N–Z)

The section devoted to schedules of classification does not develop each subject beyond the fundamental topics common to that branch of knowledge. Under each main class appears a formula indicating the facet and foci to be applied in expanding the subject field. This formula, together

with the various mnemonic patterns and punctuation symbols, is applied to produce the specific class number required.

The schedule for medicine (L) has the following formula L [O] [P] which indicates that it is to be expanded under specific region, system, organ and these, in turn, by special aspect such as anatomy physiology pathology or therapy Sources used in the construction of class numbers for diseases are *Practical medical dictionary* by T L. Stedman and *System of medicine* by William Osler [*] The following examples are cited by Ranganathan to illustrate the application of the colon to the L (Medicine) class

L.2	Human anatomy
L.3	Human physiology
L·4	Diseases in general
L·4:6	Therapeutics in general
L·4·68	Aerotherapy in general
L2	Digestive system
L2.2	Anatomy of the digestive system
L2.3	Physiology of the digestive system
L2·4	Diseases of the digestive system
L2·42	Infectious diseases of the digestive system
L2·42:6	Treatment of infectious diseases of digestive system
L2·421	Tuberculosis of the digestive system
L2·421:6	Treatment of tuberculous of the digestive system
L2·421:68	Aerotherapy of tuberculosis of the digestive system
L24	Intestines
L24·4	Diseases of the intestines

The use of the hyphen is illustrated by the following examples

L15-81	Bones of the thorax, (L15 class for thorax; L81 class for bones)
L181-875	Pigment of the face (L181 class for face L875 class for pigment)

The main classes of the Colon classification are as follows

Main classes

1-9 Generalia

Sciences

A Science (General)
B Mathematics
C Physics
D Engineering
E Chemistry
F Technology
G Natural science (General) and Biology
H Geology
I Botany

[*] Editions used were not specified.

J	Agriculture	Q	Religion
K	Zoology	R	Philosophy
L	Medicine	S	Psychology
M	Useful arts	T	Education
Δ	Spiritual experience and mysticism	U	Geography
		V	History
		W	Political science
	Humanities	X	Economics
N	Fine arts	Y	Other social sciences (including Sociology)
O	Literature		
P	Linguistics	Z	Law

Class L (Medicine) is developed in the classification system as follows

	L MEDICINE	88	Hair etc.
	L [O] : [P]	883	Nails
	Foci in Organ *or* O *Facet*		*Foci in* Problem *or* P *Facet*
1	Basic and regional	1	Preliminaries
11	Cells	13	Nursing home
12	Tissues	14	Hospitals
13	Lower extremities	15	Sanatoria
14	Abdomen	17	Anaesthetization
15	Thorax	19	Microscopy
16	Upper extremities	192	Sectioning
17	Neck	195	Fixation
18	Head	196	Mounting
192	Joints	198	Staining
198	Storage regions	2	Morphology
2	Digestive system	3	Physiology
3	Circulatory system		*To be subdivided as in* 'G Biology *with the following modifications Subdivisions when applied to O gan Number* '55 Female Genital Organs
4	Respiratory system		
5	Genito-urinary system		
6	Ductless glands		
7	Nervous system		
8	Other systems		
82	Bones		
83	Muscles	3	Obstetrics
86	Connective tissues	4	Diseases
87	Skin	41	General

42	Infectious diseases
43	Parasitic diseases
45	Functional disorder
46	Metabolistic
47	Structural, neoplasmic, etc.
473	Hernia
474	Ulcer
475	Abscess
476	Gangrene
477	Wound
48	Due to presence of foreign matter
	Specific diseases (*Illustrative*)
L-423	Poxes
L-4231	Small pox
L12-46	Obesity
L25-474	Dysentery (general)
L35-411	Anemia
L66-472	Acromegaly
L81-463	Rickets
5	Public health and hygiene
52	State control
522	Animals
	To be subdivided by Animal Characteristic as in MK Veterinary Science
523	Foods, beverages
	To be subdivided by Substance Characteristic as in E Chemistry *and* F Technology
54	Prevention of diseases in general
	To be subdivided as 4 Diseases
55	Public hygiene
6	Pharmacognosy
7	Ontogeny
	To be subdivided as in Biology
8	Physical fitness
	To be subdivided as the common subdivision b13 *Physical qualification*
	L [O]: 4—:[H] *Foci in* Handling *or* H *Facet*
	For 4 Diseases *and its Subdivisions*
1	Nursing
2	Etiology
3	Symptoms and diagnosis
4	Pathology
5	Preventive steps
6	Therapeutics (*Pranayamam*)
65	Hydrotherapy
66	Serumtherapy
67	Organotherapy
68	Aerotherapy
69	Other cures
691	Psychotherapy
7	Surgery
8	Diet regulation
9	Other factors
	L: 6—: [S] *Foci in* Substance *or S Facet as in* E Chemistry *and* F Technology
L9	Medicine as applied to special classes
L91	Childhood
L98	Tropical medicine
L93	Old age

	Schools of Medicine by Chronological Device (illustrative)		
LA	Ayurveda	LB	Siddha
		LC	Unani
		LL	Homoeopathy
		LM	Naturopathy

Bliss classification

The Bliss classification (6) was planned and developed for the Library of the College of the City of New York. It is a scholarly scientific system, encompassing all branches of knowledge, intended to provide a subject arrangement applicable to classification of books as well as to other bibliographic uses such as subject bibliographies, subject indexes, and union catalogs. This system has been published in four volumes Volume 1 A–G General, physical, and natural sciences Volume 2, H–K, Human sciences Volume 3, L–Z, History religion, ethics (political) science, law economics, useful arts, fine arts, languages and literature Volume 4 General index. The schedules in each volume are preceded by a voluminous introduction which gives information on terminology subject relationships, applications of principles, and policies and their alternatives. The notation consists of letters of the English alphabet, denoting subject, combined with numerals when necessary to indicate form, geographic, philosophical, historical, or other types of subdivision. These latter figures are mnemonic in character This classification is widely studied and has been more widely applied in libraries abroad than in America. Scholarly librarians believe this is the best system now available in the field of book classification.

In the 1952–53 edition C. C. Barnard, Librarian of the London School of Hygiene and Tropical Medicine, collaborated in the expansions for the medical sciences Richard B. Singer Harvard Medical School, assisted in the revision and correction of the sections on physiology medicine and surgery Chauncey M. Louttit, Wayne University editor of *Psychological Abstracts* assisted in the development of the psychology section, incorporating much of his original work published in 1941 (24) (see this *Handbook*, pages 132–34)

The sequence of subjects and the relative position of diseases, grouped by causative agent, differ radically from those of other classifications. This is due primarily to the philosophical approach to knowledge on which the entire classification scheme is built. Such a basis allows for a juxtaposition of subjects not commonly found in methodical schemes. This is well illustrated in the sections Psychology psychiatry and psychotherapy (I) which are developed as a unit with definitive notes covering definitions and

analogies to aid in policy formation. The main classes through I (Psychol ogy) with illustrative subdivisions of H and I, are as follows *

- A Philosophy and General Science.
  - A–AJ Philosophy
  - AK Science in general.
  - AL Logic.
  - AM–AZ Mathematics, Physical sciences in general.
- B Physics.
- C Chemistry
- D Astronomy Geology Geography and Natural History
- E Biology
- F Botany
- G Zoology
- H Anthropology General, Physical, and Racial Anthropology and the Medical Sciences.
  - HA Anthropology General.
  - HB Physical Anthropology
  - HC Anthropological Somatology
  - HD Human Body Anatomy and Physiology
  - HE Physiology Human, Normal.
  - HF Special Organs, Systems, Tissues, Functions, Processes. [Divided under systems, e.g Digestive, Circulatory]
  - HH Hygiene, Health.
  - HI Public Health and Sanitation, Public Hygiene.
  - HJ Physical Education, Training, and Culture.
  - HK Play Games, and Sports.
  - HL Recreation and Outing
  - HM Medicine, Medical Science.
  - HN Therapeutics, Materia Medica, Pharmacology and Pharmacy
  - HO Hospitals and Nursing.
  - HP Pathology General.
  - HQ Medical Bacteriology Parasitology and Infectious Diseases.
  - HR Regional, Systemic, and Organic Diseases.

The anatomy histology and physiology of the special organs and regions, whether normal or pathological, as studies for physicians or medical students, should be placed with the pathological and therapeutical studies, rather than the reverse, placing these under the anatomy and physiology in sections HD, HE, HF and HG, where the more general subjects avail for other and more general studies than those of special pathology Still other anatomical, or morphological, and physiological studies are provided for under Anthropology in Section HC, Anthropological Somatology and also in Class I, Psychology Schedule 13, for Special Diseases, will, where requisite, conveniently sub-classify the details. Cross-references will indicate certain of these interrelations.

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HS Surgery
HT Gynecology and Obstetrics.
HU Pediatrics.
HV Dermatology
HW Ophthalmology The Eye and Sight.
HX Otology The Ear and Hearing
HY Dentistry Odontology
HZ Medical Jurisprudence and Toxicology

I Psychology

An alternative location AI under Philosophy is available

IA Psychology General, and General Psychology
IB Physiological, Neurological, Psychology
IC Sensation and Perception Receptive processes and functions.
ID Feeling (Affection) and Emotion Affective processes, reactions, and functions.
IE Motor actions and Volition.
IF Intellectual, "Higher Mental Processes and Developments.
IG Personality Intelligence, and Mental Abilities.
IH Differential Psychology Individual Differences. Personnel.
II "Type psychology Psychology of Types, or Classes.
IJ Mental Hygiene.
IK Subconscious Mental States, and Psychoanalysis.
IL Abnormal Psychology
Mental Deviations and Deficiency Clinical Psychology Consultive Psychology
IM Psychiatry Mental Disorders and Diseases Psychopathology
IN Psychological Jurisprudence, "Legal Psychology
IO "Psychical Research, Occult Psychology Parapsychology
IP Social Psychology Social relations of Personalities and Groups.
IQ Alternative for Genetic Psychology better in IAT–U
IR Anthropological and Racial Psychology
IV Psychology of Childhood and Adolescence, "Child Psychology
IW Applied Psychology in general.
IY Psychology and Education, if treated together
But Educational Psychology see under Education in JE.
IZ Psychology and Sociology if treated together
Psychological Sociology see under Sociology in KB

Among the libraries using this scheme are the Ministry of Health Library (Great Britain) Library of the College of the City of New York Royal Anthropological Institute, London University of London Institute of Cancer Research and University of London, Institute of Psychiatry

Universal Decimal classification

Known as the UDC (Universal Decimal Classification) CD (Classification Décimale) and the Brussels classification, this scheme was planned originally as a basis for the bibliographic classification of the international subject index (20) compiled by the Institut Internationale de Bibliographie (I.I.E.)[7] In 1895 the Institute made arrangements to adapt the Dewey Decimal classification for this purpose, expanding it by means of symbols to provide for detailed subject connotations. The present edition is an extension of that prepared by the Fédération International de Documentation (F.I.D.) and adopted for the classification of documents by the International Organization for Standardization. Both the complete fourth edition in English (22) and an abridged edition are available. Section 61 (Medical Sciences) of the full edition is being prepared for separate publication in 1955

This classification is widely used abroad for arrangement of library collections as well as for bibliographic purposes. The notation is a combination of numerals and sign symbols which permit subdivision by addition of digits to the specific class number There are five sets of tables for common subdivisions of language, form, place, time, and point of view Each of these sets is typified by a distinguishing sign. Main classes may be combined to show relationship by means of signs of association such as + (plus) / (indicating up to and including) and : (colon) Further subdivision may be provided by the use of letters added to the main classes. This classification is described here mainly to show the degree of subject breakdown which is quite common among the English and Continental libraries. This classification is a means by which specialized subject files and subject indexes could be coded for mechanical sorting appliances. The table of numbers and symbols is given here,[8] followed by examples of their use.

Symbols	*Expressed as*	*Significance*	*Table*
+	Plus	Connection of non-consecutive numbers	(a)
/	Stroke	Connection of consecutive numbers	(a)
:	Colon	Relation	(b)
[ ]	Square brackets	Relation (Subordinate)	(b)
=	Equals	Language	(c)

[7] In 1934 the name was changed to International Institute of Documentation In 1937 to Fédération International de Documentation (F.I.D.)

[8] Reproduced with the kind permission of the publisher the British Standards Institution, the sole responsible body for the 4th edition in English, including the abridged edition. Also available from the American Standards Association, 70 East 45th Street, New York 17

Symbols	*Expressed as*	*Significance*	*Table*
(0)	Brackets nought	Form	(d)
(1/9)	Brackets	Place	(e)
(=)	Brackets equals	Race and nationality	(f)
	Inverted commas	Time	(g)
A/Z	A-Z	Individual subdivision	(h)
	Hyphen	Special analytical numbers	(i)
.00	Point double 0	Point of view	(j)
.0	Point 0	Special analytical numbers	(i)

	Examples
611+613(021)	Handbook of anatomy and hygiene
616-053.3/7	Diseases of children through adolescence
611.12:611.42	Lymphatics of the heart
31:61(411+417)	Medical statistics of Scotland and Ireland
612.84 = 4	Article on the physiology of acoustics written in French
61(03) = 3	Medical encyclopedia in German
616.314(42)	Dental art in England
616.44 066.5(= 95)	Goitre in the Mongolian race
616"17"	History of physiology in the 18th century
616(485) 17"	History of physiology in the 18th century in Sweden
615 452.003(492)	Economic aspect of proprietary medicines in Holland

The medical libraries reporting use of the Universal Decimal classification are the Royal Society of Medicine, London, and the Dr Julius Jarcho Medical Library Jewish National and University Library Jerusalem.

Medical classification systems

In the late nineteenth century medical libraries were concerned with the problems of shelf arrangement as they are today A number of medical librarians planned special schemes for their collections following the subject arrangement of the *Index Medicus* Accounts of the classification schemes of the Library of the College of Physicians of Philadelphia, the New York Academy of Medicine Library the Library of the Medical Society of the County of Kings, and the Library of the Medical and Chirurgical Faculty of Maryland appeared in 1943 in the first edition of this *Handbook* (25 p. 159–63) They are seldom used outside the library of their origin, and are not, therefore, included in this résumé of medical classification systems. Since 1943 there have been major revisions in nearly every published classification scheme for medical literature, and two editions of a new one (37–38) have appeared. The following brief descriptions of the various medical classification plans will be limited to their history their

notation, their chief advantages or disadvantages, and to features in which each one appears to be unique.

Army Medical Library classification

The rôle the Army Medical Library* has played in the medical subject classification field, from the time of Billings to the present day is one of major importance. The change in this library's service demands brought about by World War II emphasized the need for a modernization of the library's bibliographic services and technical processes. A special Survey Committee was appointed in 1943 to formulate recommendations for this purpose. Since the shelving arrangements of the library's collection had been subject to endless shifting, owing to lack of space, little of the original classified order instituted by Billings (25 p 154–56) remained (30) The committee, in reviewing various available classifications for the library found none that quite fitted the special needs of this vast, heterogeneous collection. Mary Louise Marshall, a member of the committee, was appointed to work out a classification for medicine and its related sciences which would be substituted for the existing QM–QR and R classes of the *Library of Congress schedules and used in conjunction with the Library of* Congress schedules for other subject fields. Before this project was started, extensive conferences and discussions were held with physicians, scientists and librarians on (1) juxtaposition of tables relating to the various body regions, systems, and organs (2) their relationship to medical specialties (3) the scope of each specialty as well as its nomenclature and (4) the means of providing for possible change in etiologic concept of pathologic conditions, for expansions in standard fields, and for inclusion of subjects in the unforeseeable future. The result was the preliminary edition consisting of the QS–QZ (Pre-clinical sciences) and W (Medicine and related subjects) classification schedules (37)

Since these schedules were planned originally to be part of the Library of Congress classification, the notation follows the same form, consisting of capital letters followed by numbers. The device of floating tables provides numerous possibilities for expansion without making a cumbersome notation The order of subjects is in keeping with recent trends in scientific knowledge and in medical research and teaching The pre-clinical sciences (QS–QZ) are expanded and developed in accordance with modern needs. These schedules are general in nature, since the special aspects, clinical application or pathologic involvements are provided for under the anatomic structure in the clinical schedules (W)

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* On May 9 1952, the Army Medical Library was renamed the Armed Forces Medical Library

The classification incorporates (1) uniform notation for form divisions, as well as for other types of general material in each subject unit (2) floating tables, which supply standard subdivisions for expansions (3) grouping of all aspects concerning a single body structure under the anatomic unit where practical usage permits (4) etiologic classification of pathologic conditions based on the *Standard nomenclature of disease* (28) (5) grouping by medical specialties and by age groups where logical. Numerous cross references to the Library of Congress schedules are given throughout the classification to point up alternatives or preferred usage in those schedules. One of the outstanding innovations is in the etiologic classification of pathologic conditions as applied to shelf arrangement. The pattern is set up on that of the *Standard nomenclature* and frees the classifier from any doubt as to the accepted cause of a disease. Thus, as later editions of the *Standard nomenclature* reflect the changes in disease concept, it will be possible to classify later book material accordingly The index to this edition is quite comprehensive and is supplemented by that of the *Standard nomenclature*

A detailed classification of this type has many possibilities, chief of which is the fact that it may be tailored to fit the requirements of collections of any size. This preliminary edition, intended primarily for the Army Medical Library was put into trial operation there from October 1946, to October 1949 During this period it was adopted by the Veterans Administration hospital libraries, University of Arkansas Medical School Library Los Angeles County Medical Society Library and by the Tulane Medical School Library [*]

This preliminary edition was superseded in the Army Medical Library in October 1949 by an adaptation based on recommendations of the Director of the Library This revised version, issued in 1951 has the same title as the preliminary edition but is designated the first edition (38) The first edition differs in many respects from the preliminary one although it retains some of the mnemonic features. The former distinction between the pre-clinical and clinical sciences has been abandoned by (1) amalgamation of certain classes, such as QV Pharmacology physiological and therapeutic, and QW Bacteriology and immunology (2) realignment of others, notably in Infectious diseases (WC) transfer of dermatology from the Musculo-skeleton—Integumentary system (WE800–1169) to WR, and of Obstetrics from WP to WQ, to form separate entities transfer of section

[*] Tulane plans to continue with changes made in the five years or more of experience with it in a collection of more than 90,000 items, and it will be maintained and revised as needed by the staff of that library

on the Breast from WE1200 (Integumentary system) to WP800 (Gynecology) assignment of unused numbers WH to Hemic and Lymphatic systems (formerly in WG) shifting of History of medicine from W to WZ (3) introduction of a new section Systemic diseases (WD) (4) reorganization in the approach to classification of infectious diseases "by etiological agent rather than physiological system," the principle which underlies most of the rest of the schedules (5) relegation of special topics with medical as well as social significance to the Library of Congress schedules in Class H and (6) change in the basis of Pediatrics (WS) from the physiologic system to that of an age group As the Introduction clearly states, arbitrary decisions have been made in various sections, and the resulting classification is one that meets the requirements of the Army Medical Library in a simple, direct outline supplemented by a detailed index. The notation pattern is identical with that of the preliminary edition. New tables have been compiled which supersede the floating tables of the previous edition. The Introduction supplemented by good scope notes and references to other Library of Congress schedules, gives a direct clue to classification principles set forth specifically for the Army Medical Library classifiers.

For both editions thorough familiarity with Library of Congress classification schedules and their policies is imperative to amalgamate the two classifications successfully

The simplicity of this classification has a strong appeal to libraries faced with mounting costs in that field. One must bear in mind, however that there are physicians on the Army Medical Library staff to assist in problems of terminology disease entity subject relationships, and scientific complexities when the index to the classification provides no clue to placement of specific material. The library issues supplementary notes to the classification in order to aid those libraries adopting the 1951 edition.[19]

It is interesting to note that the revised R schedule of the Library of Congress classification (40) tends to include related topics, previously allocated to other fields, where there is a clinical connotation. The 1951 Army Medical Library classification reverses this policy The preliminary edition of the Army Medical Library classification like the fourteenth edition of the Dewey Decimal classification (15) is a detailed scheme the first edition, like the fifteenth edition of Dewey (16) is simplified and amalgamated to the extent that it requires frequent notations for use by other libraries if it is to be interpreted and expanded consistently

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[19] The following supplementary lists are available on request Army Medical Library Classification 1951 Additions and changes, List no. 1 3, 1952 53.

Preliminary Edition [11]

The main classes, with the floating tables, are as follows:

Preclinical Sciences

QS	Human anatomy Histology Embryology Physical anthropolgy
QT	Physiology
QU	Biochemistry
QV	Pharmacology
QW	Bacteriology
QX	Parasitology
QY	Immunology
QZ	Pathology

Medicine and Related Subjects

W	General and miscellaneous material relating to Medicine and Physicians
WA	Public Health
WB	General practice of Medicine
WC	Body as a whole
WD	Regions of the body
WE	Musculo-skeletal system. Integumentary system
WF	Respiratory system
WG	Cardiovascular system. Hemic and Lymphatic system
WI	Digestive system
WJ	Urogenital system
WK	Endocrine system
WL	Nervous system
WM	Psychiatry
WN	Radiology
WO	Surgery
WP	Gynecology Sex. Reproduction. Obstetrics
WS	Pediatrics. Adolescence
WT	Geriatrics
WU	Oral surgery and dentistry
WV	Otorhinolaryngology
WW	Ophthalmology
WX	Hospitals
WY	Nursing

TABLE A *For the uniform arrangement of general material in all schedules*

These numbers may be used (1) as given (2) terminally or (3) following a decimal point, as in the case of general works on a designated

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specialty e. g WE800.11 History of dermatology· WE800.12 Biography and bibliography of dermatologists WE800.14 Bibliography of dermatology

1	Periodicals, Societies, etc.
2	Yearbooks
3	Congresses
4	General works (in the preclinical sciences only)
	Collections
5	By several authors
7	By individual authors
9	Addresses, essays, lectures
10	Voyages and expeditions
11	History
12	Biography
13	Dictionaries and encyclopedias
14	Bibliography
15	Classification. Nomenclature
16	Tables
17	Atlases and iconographies
18	Study and teaching
19	Schools and colleges
22	Directories
	Laboratories, institutes, etc.
23	Collective
24	Individual
25	Laboratory technique
26	Laboratory apparatus, equipment, etc.
	Museums, hospitals, dispensaries, etc. (as applied to a specialty)
27	Collective
28	Individual
32	Laws

TABLE D *For the subdivision of material on etiologic groups and individual disease conditions when this is not provided for in the regular tables*

.01	History and bibliography
.1	Etiology and pathogenesis
.2	Prevention
.3	Epidemiology mortality and statistics
.4	Experimental
.6	Transmission
.7	Diagnosis
.71	Prognosis
.8	Pathology and bacteriology
.9	Therapy

TABLE M *For the subdivision of material relating to medical schools and other institutions*

.1 Charter
.2 Descriptive material. General
.22 Laboratories
.24 Libraries
.26 Museums
.3 Administration. Reports
.32 Governing board
.34 President
.36 Directors and deans
.4 Faculty
.5 Catalogs, announcements, circulars of information
.52 Registers. Lists of alumni
.54 Alumni associations

TABLE R *For use in the subdivision of material relating to regions systems and organs*

The changing first figure (designated by –) represents the region, system, or organ.

–01 Anatomy Embryology Histology
–02 Physiology
–13 Hygiene

Example: WG101 Anatomy of Cardiovascular system
WG201 Anatomy of the Heart
WG102 Physiology of Cardiovascular system
WG302 Physiology of Arteries

–40 Diseases

The term diseases is here used in its broadest sense, referring to any deviation from a state of health or from the normal—as the word is used in Jordan's *Standard Nomenclature of Disease and Standard Nomenclature of Operations* 3d ed., 1942.

Example WG140 Diseases of Cardiovascular system
WG240 Diseases of the Heart

–41 Examination, diagnosis, and diagnostic methods

Example WG141 Diagnosis of Cardiovascular system
WG241 Diagnosis of Heart disease

–42 Pathology

Example WG242 Pathology of the Heart

–43 through –49

Manifestations of disease. Conditions due to mixed or varied etiology

These numbers are for individual assignment under the respective organs or anatomic structures.

Example WG243 Cardiac insufficiency paroxysmal dyspnea
WG246 Coronary thrombosis
WJ344 Pyelitis
WJ345 Kidney cyst
WJ346 Nephrosis
WJ347 Nephritis

[It should be noted that all the conditions in these sections are either symptoms of disease or diseases of varied etiology.]

Etiological classification of diseases

-50 Diseases due to prenatal influence
Example WG250 Heart diseases due to prenatal influence

-51 Diseases due to lower plant or animal parasites
Example WG251 Heart. Coronary arteritis. Rheumatic heart disease

-52 Diseases due to higher plant or animal parasites
Example WG252 Heart. Actinomycosis. Echinococcosis. Schistosomiasis. Trichinosis.

-53 Diseases due to intoxication
Example WG253 Cardiac poisoning by drugs

-54 Diseases due to trauma or physical agent
Example WG254 Wounds of the heart (foreign bodies, rupture, etc.)

-55 Diseases secondary to circulatory disturbance
Example WG255 Arteriosclerotic heart disease

-55.5 Diseases secondary to disturbance of innervation or of psychic control
Example WG255.5 Neurogenic arrhythmia

-56 Diseases due to or consisting of static mechanical abnormality due to unknown cause (calculus, displacement, gross change in form, or obstruction)
Example WG256 Coronary embolism

-57 Diseases due to disorder of metabolism, growth, or nutrition
Example WG257 Hyperthyroid heart

-58 Neoplastic diseases
Example WG258 Heart cancer

-59 Diseases due to unknown or uncertain cause
Example WG259 Heart block. Paroxysmal tachycardia

-66 Therapeutics
Example WG266 Cardiac therapeutics

-67	Medical therapy	
	Example WG267	Cardiac medical therapy
-68	Surgical therapy surgery	
	Example WG268	Surgery of the heart
-69	Other forms of therapy	
	Example WG269	Other forms of cardiac therapy

TABLE T *For use in the subdivision of material relating to study and teaching*

.2	Curriculum
.3	Methods
.4	Compends and synopses
.6	Outlines, syllabi lecture notes, etc.
.8	Examination questions, etc.
.9	Charts, models, moving picture films, and other illustrative materials

First Edition

The main classes, with the mnemonic table, are as follows

Preclinical sciences

QS	Human anatomy
QT	Physiology
QU	Biochemistry
QV	Pharmacology
QW	Bacteriology and Immunology
QX	Parasitology
QY	Clinical Pathology
QZ	Pathology

Medicine and Related Subjects

W	General and Miscellaneous Material Relating to the Medical Profession
WA	Public Health
WB	Practice of Medicine
WC	Infectious Diseases
WD	Systemic Diseases
WE	Musculoskeletal System
WF	Respiratory System
WG	Cardiovascular System
WH	Hemic and Lymphatic Systems
WI	Gastrointestinal System
WJ	Urogenital System
WK	Endocrine System
WL	Nervous System
WM	Psychiatry
WN	Radiology
WO	Surgery

WP Gynecology
WQ Obstetrics
WR Dermatology
WS Pediatrics
WT Geriatrics
WU Dentistry Oral Surgery
WV Otorhinolaryngology
WW Ophthalmology
WX Hospitals
WY Nursing
WZ History of Medicine

The system also provides for assigning form numbers. "Under each main table the numbers 1–32 (as well as in other occasional sections, e.g WO–201–) have been uniformly assigned, with the exception of minor deviations dictated by the nature of the material. Not all numbers are listed under every table any now omitted may be interpolated as required (38, p 8) Under Bacteriology and immunology (QW) the following numbers have been assigned

1 Societies
4 General works
Collections
5 By several authors
7 By individual authors, A–Z
9 Addresses. Essays. Lectures
11 History (Table G)
13 Dictionaries. Encyclopedias
15 Classification. Nomenclature
17 Atlases. Pictorial works
18 Study and teaching
22 Directories (Table G)
Laboratories, institutes, etc.
23 Collective
24 Individual, A–Z
25 Laboratory technique
26 Apparatus, equipment, etc.
Museums, exhibits, etc.
27 Collective
28 Individual, A–Z

Libraries using the preliminary edition of this classification are the Los Angeles County Medical Society Library the Rudolph Matas Medical Library Tulane University the Medical School Library of the University of Arkansas, and the Veterans Administration libraries. Libraries using the

first edition are the Armed Forces Medical Library the Medical Library of Los Angeles County General Hospital, the New York Academy of Medicine Library and the Biomedical Library of the University of California at Los Angeles.

Barnard classification

This scheme, which has been in use in the London School of Hygiene and Tropical Medicine for many years, was formulated by the librarian of the School, Cyril C. Barnard as a result of dissatisfaction with the adaptability of existing classifications to this very specialized collection. Barnard acknowledges help from the 1925 edition of the Boston Medical Library classification in revising and expanding his system before its publication in 1936. He adopted the idea of form divisions and the use of a local list as found in the Dewey classification. A notation of letters, without numerals, is used with a detailed development of some of the sections inspired by the Library of Congress classification. It was believed that the letter notations offered greater possibilities for expansion than other plans. There is a logical sequence of arrangement from the general to the specific in the classification. Diseases are classified by causative agent, all aspects of any disease being grouped together In the first edition (3) the pathologic approach rather than the clinical is emphasized, since the plan was originally devised for use in a library primarily on hygiene and tropical medicine.

This classification was awarded the Diploma with Honours (1931) by the British Library Association, and is a scholarly and brilliant piece of work. William R. LeFanu, librarian of the Royal College of Surgeons, where the classification is also used, is preparing modifications of Class D History of medicine, to include histories of special subjects as a single class, so that they will be shelved close to historical texts, Class C. He is also contemplating an adaptation of Surgery Class V

The second edition (4) includes a thorough revision and expansion of the main schedules the insertion of new sections, e.g., BR, Radiology and atomic energy and UA, Aviation medicine and the rearrangement of a number of specialties such as discarding the old class H for Parasitology and including General parasitology under class L. Class H includes Immunology (formerly JB) and Infectious diseases (formerly UD) Parasitology (formerly H) is included under L, General pathology K is now the unit for Virology Spirochaetes having been transferred to a section of Class J Industrial medicine is in UD formerly used for Infectious diseases.

A great degree of flexibility and expansion has been incorporated into the scheme by means of a system of eleven auxiliary tables providing subdivisions for general as well as special needs (under organs, pathologic

conditions, tumors, parasites, drugs, etc.) Alternative locations to meet the needs of "different types of libraries or personal ideas" are indicated, e.g., Zoological anthropology (BLU or ZJD) Industrial poisoning (GJ or SQX) Industrial hygiene (SQR or UD) Radiology (BR or QR) An outstanding innovation is an alternative notation for the entire classification so that it can be used for a general medical library This feature spreads the notation in such a manner that the subject material for the average medical collection is distributed through the alphabet rather than contracted into one or two letters as in the first edition. A study of the outline will show how practically and logically this method has been developed. The main classes, with the subdivisions of Classes S and U are as follows [13]

Original	*Alternative*	
A	A	Generalia
B	B	Natural sciences, including anatomy and physiology
C	C	General medicine
D	D	History of medicine
E	E	Epidemiology medical statistics and medical geography
F	F–FB	Aetiology diseases of doubtful causation, and effects of physical agents
G	FC–FD	Toxicology and diseases of chemical causation (poisoning, deficiency diseases and disorders of metabolism)
H	FE–FF	Immunology and infectious diseases
I	FG	Mycology and mycoses
J	FH–FP	Bacteriology and bacterial diseases, including spirochaetes and spirochaetoses
K	FQ–FV	Virology and viral diseases, including rickettsiae and rickettsioses
L	FW	Parasitology
LA–LZ	FWA–FXY	Protozoology
M	FY	Helminthology
N	FZ	Medical entomology including other arthropods of medical interest
O	FZQ	Transmission of communicable diseases
P	G	Pathology
Q	H	Diagnosis and clinical medicine
R	I	Materia medica, pharmacy and therapeutics
S	J	Hygiene, public health and social medicine, including hospitals
SB	JB	Environmental hygiene
SC	JC	Air
SD	JD	Light
SE	JE	Water supply

[13] Reproduced with the author kind permission.

Original	*Alternative*	
SF	JF	Food, drink, etc.
SG	JG	Soil, sites and buildings
SH	JH	Sewerage and sewerage systems
SI	JI	Disposal of the dead
SJ	JJ	Sanitary engineering and public cleansing
SK	JK	Personal hygiene
SO	JO	Public health
SP	JP	Preventive medicine
SQ	JQ	Social medicine
SR	JR	Rural hygiene
ST	JT	Tropical hygiene
SU	JU	Urban hygiene
SV	JV	Military hygiene
SW	JW	Naval and maritime hygiene
SX	JX	Aviation hygiene
SY	JY	Hospitals
T	JZ	Medical jurisprudence
U	K–UY	Specialties of medicine
UA	K	Aviation medicine
UB	LA–LB	Tropical medicine
UBZ	LF	Polar medicine
UC	LG–LV	Military medicine
UD	M	Industrial medicine
UE	N–NX	Locomotor system
UF	NY	Arthrology (Syndesmology)
UG	NZ	Myology
UH	O	Circulatory or Cardiovascular system
UI	PA–PO	Neurology
UJ	PP–PZ	Psychology and Psychiatry
UK	Q	Ophthalmology
UL	RA–RH	Otology
UM	RI–RR	Rhinology
UM	RS	Laryngology
UO	RT–RY	Respiratory system
UP	SA–SN	Digestive system
UQ	SO–SZ	Endocrine system
UR	TA–TI	Dermatology
US	TJ–TO	Urology
UT	TP–TV	Sexology
UU	TW–TZ	Male genital organs
UV	UA–UK	Gynaecology
UW	UL–UQ	Obstetrics
UX	UR–UY	Paediatrics

Original	*Alternative*	
UY	UY	Geriatrics
V	V	Surgery
W	W	Dentistry
X	X	Veterinary science
Y	Y	Agriculture
Z	Z	Geography anthropology and sociology

Libraries using this classification are the Robert and Lilian Lindsay Library of the British Dental Association, London (first edition, modified) the Mississippi State Board of Health Library Jackson the Liverpool Medical Institution Library the London School of Hygiene and Tropical Medicine Library the Royal College of Surgeons Library London and the library of the School of Public Health and Tropical Medicine, University of Sydney Australia.

Boston Medical Library classification

This scheme, originally devised by James R. Chadwick and Elizabeth J Collins in 1879 was later expanded and revised by James F Ballard, Director of the Boston Medical Library It was developed along the lines advocated in the *Index Medicus* classification with modifications to include scientific advances in later editions. In 1921 this plan was adopted as the official classification scheme of the Medical Library Association, to be recommended for use in medical libraries (26) as the best system at that time. The Association of Medical Colleges of Japan has translated the classification into Japanese.

The headings for the third edition, 1944 (9) are numbered from 1 through 41 The classification begins with general reference works, history of medicine and related subjects, followed by the biological sciences, medicine and its subdivisions and specialties, science, and sociology It is the object of this scheme to bring together all material relating to a given organ or series of organs. Separate sections include inaugural dissertations, hospital reports, periodical and serial publications. Subdivisions are indicated by capital letters, further subdivisions by lower-case letters. There is no miscellaneous section, all material being assigned to some class.

The third edition differs from the preceding one (8) in some respects. It has incorporated the expansions in Tuberculosis (25 p 170–72) in Dentistry (25 p 179–80) and in Nursing (25 p 178) that had been formulated by special libraries in those fields. Schedules 41 and 42 of earlier editions have been amalgamated reducing the total number of headings to 41 Natural science, formerly in Section 36, has been transferred to Section 2, Biology An additional feature of the third edition is a Short

Scheme for Small Libraries which condenses the schedules into a simple outline. The index, a separate volume, adds greatly to the usefulness of the scheme.

This classification, being based on a consecutive series of numbers, is remarkably expansive and simple, giving brief notation with close classification, and is readily understood by those unfamiliar with the complexities of medical terminology. Libraries using this system are in general satisfied with it; they suggest, however, more frequent revision to keep abreast of the advance of medical knowledge. The main classes, with sample subdivisions to illustrate development, include:[13]

1 General reference. History of Medicine. Special collections.
- 1A General reference works. Encyclopedias of knowledge.
  - 1Ad Language dictionaries.
- 1B Bibliography. Bibliophilology. General.
- 1C Library science and libraries.
- 1D Medical and scientific dictionaries. Medical terminology.
- 1E Biography. Medical, scientific and general. Collective.
- 1F History of Medicine. General. (History of science, see 36Eh)
- 1G Anecdotes, facetiae, plays, novels and tales, character sketches, of medical interest.
- 1H Collected works. Complete works of individual authors.
- 1J Collections by several authors.
- 1K Manuscripts. Autographs.
- 1L Newspaper cuttings.
- 1M Special collections schedule.
  - 1Ma–Mz Schedule to be formulated for each library according to individual needs. Selected subdivisions used in Boston Medical Library.
  - 1Ma Books in Oriental Languages.
  - 1Me English Imprints before 1701.
  - 1Ml Incunabula. Before 1501.
  - 1Mj Japanese and Chinese books.
  - 1Mm Medical and Scientific Hebraica and Judaica.
  - 1Ms Russian and other Slavic Languages.
  - 1Mu American Imprints.
  - 1Mv Rare and Valuable books.
  - 1Mvo Out of print. Modern. 1850+
  - 1Mx Books by writers of the 16th Century 1501–1600. Medical books printed in the century.
  - 1Mz Books by writers of the 17th Century 1601–1700. Medical books printed in the century.

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1N Medical education.
1O Medical and scientific schools. School associations, clubs, etc.
1P Medical ethics.
1R Medical and Scientific Societies, congresses, conventions and exhibitions.
1T Medical and scientific museums.

2 Biology
3 Anatomy
4 Physiology
5 Physiological chemistry Metabolism and Nutrition.
6 Theory and practice of medicine.
7 Clinical medicine.
8 Pathology
9 Bacteriology
10 Parasitology Parasitic diseases. Mycoses.
11–12 Diseases due to specific infection.
13 Disorders of metabolism. Constitutional diseases. Unclassified diseases. Intoxications.
14 Blood, lymphatics and ductless glands. Internal secretions.
15 Circulatory system. Cardiovascular
15A Circulatory system. General.
15B Anatomy of the circulatory system. General and special.
15C Physiology of the circulatory system. General and special.
15D Diseases, abnormities, injuries and surgery of the circulatory system in general.
15E Heart and pericardium.
15F Arteries and veins.
15G Capillaries.
15L Vaso-Motor system.
16 Digestive system. Gastrointestinal.
17 Genito-urinary system.
18 Locomotor system. Orthopedics.
19 Nervous system.
20 Respiratory system.
21 Medical geography Climatology and meteorology
22 Therapeutics. Pharmacology Materia medica and pharmacy
23 Surgery
24 Gynecology
25 Obstetrics.
26 Pediatrics.
27 Dermatology
28 Ophthalmology
29 Otology
30 Dentistry

31 State medicine.
32 Public health. Preventive medicine.
33 Military and naval medicine and hygiene.
34 Medical jurisprudence and toxicology
35 Veterinary medicine.
36 Science. Sociology
37 Inaugural dissertations and theses.
38 Directories, almanacs and kindred publications.
39 Hospital reports. Statistical.
40 Public documents.
41 Periodicals and serials. Publications of societies and institutions.

Among the libraries using this scheme are the Boston Medical Library the Cleveland Medical Library Association the Charles Denison Memorial Library School of Medicine, University of Colorado, Denver the library of the Schools of Medicine and Public Health, Harvard University Boston Iowa State Medical Library Des Moines Treadwell Library Massachusetts General Hospital, Boston Mayo Clinic Library Rochester Minnesota Peking Union Medical College Library Ramsay County Medical Society Library St. Paul, Minnesota.

Expansions of some sections of this classification have been made by the following libraries, from whom details can be had Section 9 Bacteriology and Section 22, Therapeutics, pharmacology materia medica, and pharmacy by the Library of the College of Medical Evangelists, Loma Linda, California Section 19 Nervous system, by the Science and Jelliffee Libraries, Institute of Living, Hartford, Connecticut Section 32/0, Hospitals, by the White Memorial Medical Library College of Medical Evangelists, Los Angeles, California Section 43 Nursing, by the U S. Naval Hospital Medical Library St. Albans, New York. Various sections throughout have been expanded to provide for new topics by the Mayo Clinic Library Rochester Minnesota.

Cunningham classification

A medical library classification (10) formulated by Eileen R. Cunningham, librarian of the Vanderbilt University Medical School Library was first printed in visible index form in 1929 Subsequent revised editions, published in book form, include expansions to 1946, and a new edition is in press. The classification is based on an outline planned originally for collections in the Anatomy Department, Johns Hopkins University Medical School. This outline incorporated a logical pattern around which a classification scheme for the medical book and pamphlet collection at Vanderbilt was developed.

More elaborate in structure than other special medical classifications published before its appearance, it is distinguished by a marked logic in its subject relationships and definite adjacent placement of correlated ideas. It is separated into four distinct parts (1) biologic sciences, (2) organic systems of the body (3) pathologic and clinical subjects, and (4) paramedical works of interest in medical collections. Each broad division is worked out with remarkable foresight so that new theories or discoveries resulting from future scientific research can be logically placed. The plan for the grouping of specific infectious diseases used here is an outstanding innovation in medical classification, not so much because the etiologic aspect is stressed but rather because bacteriologic classification is introduced to form the class division for each disease known to be caused by a specific organism or parasite. The juxtaposition of subjects also differs somewhat from that in other classifications, showing an extension of our knowledge concerning the interrelation of various medical theories.

The 1946 edition has incorporated a number of changes in realignment of subjects, particularly of chemistry food and nutrition, diet in disease, and child psychology Modern concepts and recent discoveries have brought about revision in hygiene, preventive medicine and public health, as well as shifts in various etiologic categories of disease classification. Military medicine and radiology have undergone substantial expansion and development as entities and the scope of the medical history section has been broadened to include history of specialties.

The classification symbol is a combination of letters and figures, with a capital letter for each general division and numerals for subdivisions. Further subdivision is carried out by an additional letter (lower case) and again by a numeral, should a fourth division be required. It is easy to understand and capable of much expansion without necessitating the reclassification of previously cataloged material. By the addition of a letter or numeral to the one already assigned, the insertion of a new class is a comparatively simple matter accomplished without affecting the rest of the section or disorganizing the shelf arrangement. Suitable either for pamphlets or books and easily adjusted to any size or type of collection this is an outstanding example of special subject classification. The outline of general divisions follows.[14] The subdivisions of Sections L and R are included to show the way in which the scheme is developed.

A General Biology Genetics, Anthropology and Ethnology
B Systematic and Morphological Biology
C Physiological Biology

[14] Reproduced with the kind permission of the author and the publisher Vanderbilt University Press.

D Biophysics and Biochemistry Chemistry in Relation to Life Processes
E Integumentary System (Including Skin, Hair Nails, Teeth, Dentistry)
F Skeletal System, Connective Tissues and Muscular System (Including Locomotor System and Orthopedics)
G Nervous System (Including Psychology and Psychiatry)
H Special Sense Organs and Nerve Endings (Including Ophthalmology and Otology)
I Respiratory System and Otorhinolaryngology
J Circulatory System, Heart, Blood Vessels and Lymphatics
K Hematopoetic System, Blood, Lymph and Interstitial Fluids
L Endocrine Glands, Growth, Senescence and Disorders of Metabolism and Nutrition
L2 Endocrine Glands, Endocrinology General
L3 Adrenals, Suprarenals
L3a Morphology (Including Anatomy Histology and Embryology)
L3b Physiology (Including Secretion and Chemistry)
L3c Pathology (Diseases, Abnormalities and Injuries)
L3c1 Diagnosis
L3c2 Treatment
L3c3 Surgery
L3c3a Wounds and Injuries
L3c4 Tumors
L3c5 Addison s Disease
L3c6 Inflammations and Infections
L4 Pineal Body
L5 Pituitary Body (Hypophysis)
L6 Thymus
L7 Thyroid
L8 Parathyroids
L9 Growth
L10 Senescence (Old Age, Geriatrics)
L11 Disorders of Metabolism and Nutrition (Deficiency Diseases)
M Digestive System (Gastro-Enterology) Proctology and Abdomen
N Reproductive System, Male and Female (Including Gynecology and Obstetrics)
O Urinary System and Urology (Including Works on the Genito-Urinary System)
P General Medicine and Pathology
Q Bacteriology Immunity and Parasitology (Animal Parasites)
R Hygiene, Preventive Medicine and Public Health (Including Administrative Medicine, State Medicine, Medical Economics)
R1 Hygiene and Preventive Medicine, General
R2 Public Health and Official Medical Services (Administrative Medicine)

R3 Public Sanitation and Community Hygiene (Sanitary Engineering)
R4 Industrial Hygiene and Occupational Diseases (Hygiene of Occupations and Trades)
R5 Public Health Legislation
R6 Vital Statistics (General)
R7 Philosophy of and Plans for Medical Care (Medical Services, Medical Economics and Cost of Medical Care)
R11 Infection (Prevention and Sources)
R12 Epidemiology General
S Clinical Medicine (Including Tropical Medicine, Diagnosis and Infectious Diseases)
T Development and Care of Children. Diseases of Children
U Surgery Surgical Anatomy and Pathology Minor Surgery Plastic Surgery and Surgical Therapeutics
V Pharmacology Materia Medica, Pharmacy and Therapeutics
W Medical Jurisprudence (Forensic Medicine, Legal Medicine) and Toxicology
X War Medicine and Surgery (Military and Naval Medicine)
Y Radiology Roentgen Rays, X-Ray Radium, Radon and Radioactive Substances (Including Radiology and Radiology Departments in Hospitals)
AA Medical Terminology Directories, Special Collections, Bibliography History Education, Ethics and Societies
CC Hospitals, Dispensaries, Clinics
DD Nursing and Nurses (Including Education and Training)
EE Fiction
FF General Reference Works (Non-Medical)
GG History
HH Education and Educational Institutions (Including Libraries)
JJ Sociology Labor and Public Welfare
KK Philosophy and Religion
MM Science (Including Non-Medical Scientific Institutions and Societies)
NN General Methods and Techniques
OO Mathematics, Algebra and Geometry
PP Physics and Physical Instruments
QQ Chemistry and Chemical Methods
RR Industrial Botany and Agriculture
UU Laboratory Domestic and Wild Animals

Among the libraries using the Cunningham classification are the library of the American College of Surgeons, Chicago the library of the Centre International de l'Enfance, Paris the Medical Department of the Chattanooga Public Library Tennessee library of the Medical College of Alabama, Birmingham Memorial Library St. Margaret Hospital, Hammond,

Indiana the library of Western Psychiatric Institute and Clinic, Medical School, University of Pittsburgh Medical School Library Vanderbilt University Nashville, Tennessee.

Section TIf, Child welfare, has been expanded by the library of the Centre International de l'Enfance, 2bis Avenue du Parc de Passy Paris 16e

Unclassified libraries

There are a few libraries which function efficiently under an alphabetic author arrangement, entirely disregarding classification of textbooks and monographs by subject. Departmental libraries and highly specialized collections available for research workers usually limit their collections of textbooks and monographs to comparatively few volumes, since periodicals, reports, and other serial publications are in greater demand and prove of more use. Furthermore, workers in specialized fields are familiar with other writers in their own field and sometimes prefer this author arrangement to that of classification by subjects. Cutter numbers (12–14) may be used to differentiate individual authors and titles. A complete subject catalog is necessary in such a system for use when an author's name is unknown or when all the books on a given subject are wanted. Libraries using this plan are the Egbert LeFevre Memorial Library College of Medicine, New York University and the library of the Rockefeller Institute for Medical Research, New York.

Special medical classifications

A few special classifications have been developed in libraries devoted to certain subjects and are used successfully in these collections.

Archives

A classification (36) entitled "Templana classification, planned by the Sullivan Memorial Library of Temple University Philadelphia, keeps its vast collection of archival university material in order It is so inclusive that it should prove a very practical guide for anyone who is attempting to classify books, papers, and miscellaneous items of this nature. Information about the classification can be had from the Sullivan Library

Dentistry

The following classification on dentistry[13] is used by many dental libraries. It is worked out as the second revision of the Black system of

[13] Reproduced with the kind permission of the Committee on Revision of the Black system of classification, American Dental Association.

classification and follows the decimal principle of the Dewey Decimal scheme. Some of the main divisions are as follows

D	General dentistry
D1	Basic (non-clinical) sciences (including works treating more than one of these)
D12	Histology general, including supporting tissues of teeth & preparation of specimens (see D634 for diseases)
D13	Physiology
D14	Embryology dentition, eruptive process
D15	Physics—dental
D16	Chemistry—dental
D2	Operative dentistry
D3	Prosthetic dentistry
D4	Orthodontia
D5	Dental health and the patient
D6	Oral pathology diagnosis, treatment (used for works covering more than one of these)
D7	Oral surgery
D8	Dental practice & management including general works on jurisprudence, legislation, ethics, economics & office management (used for works covering more than one of these)
D9	Dental anesthesia (anesthesia for children D279)

Expansion to four digits is possible. The two-digit classification is recommended; the use of the third and fourth digits is optional.

Nursing

The National League for Nursing has developed a classification for the libraries of nursing schools (29) Existing systems were found to be inadequate since nursing was a distinct professional discipline, combining features of a general as well as a special nature. The scheme was originally drawn from several sources, the Dewey Library of Congress, Boston Medical, National Health Library and others. The latest revision incorporates suggestions "from Miss Constance Lima of the Bellevue Schools of Nursing Library New York, and from the Boston Workshop of the Nursing School Library held at Simmons College in 1945 (29 p 206–44) Changes have been made to meet the needs of rapidly expanding knowledge in clinical and social science terminology has been modernized a mnemonic pattern has been introduced in the interests of consistency Based on curricula of schools of nursing, it attempts to cover not only current practices but future trends. The following outline shows the fields covered [14]

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[14] Reproduced with the kind permission of the National League for Nursing.

000 General

000 General
010 Bibliographies
020 Atlases, maps, directories, almanacs, yearbooks
030 Dictionaries
040 Encyclopedias
050 Exhibits
060 Association reports
070 Laws
080 Statistics and research methods
090 Periodicals

100 Natural Sciences

100 Natural Science
120 Biology
130 Physiology
140 Anatomy
150 Zoology
160 Chemistry
170 Physics
180 Microbiology
190 Botany

200 Social Sciences

200 Social Sciences
210 Sociology
220 Social groups
230 Social disorganization or Social pathology
240 Anthropology
250 Psychology
260 Economics
270 Political science
280 Education and recreation
290 *Geography*

300 Nurses and Nursing

300 Nurses and nursing
310 Institutional nursing (hospitals, sanatoriums, clinics, prisons)
320 Public health nursing
330 Private duty nursing
340 Governmental nursing agencies
350 Nursing in foreign countries
360 Nursing by Religiouses
370 Nursing in other special fields and by special groups
380 Practical nursing
390 Biography

400 Medicine

400 Medicine
410 Practice of medicine (special and specific)
420 Practice of medicine (systemic)
430 Surgery
440 Obstetrics
450 Pediatrics
460 Gynecology
470 Orthopedics
480 Neurology and psychiatry
490 Therapeutics, Materia Medica, and Pharmacology

500 Hospital Administration

500 Hospitals and Clinics
510 Hospital construction
520 Hospital organization and administration
530 Medical and surgical departments of hospital
540 Nursing department of hospital
550 Dietary department of hospital
560 Hospital housekeeping
570 Engineering department of hospital
580 Laundry and cleaning
590 Hospital social service

600 Food, Nutrition, and Dietetics

600 Food
610 Food for the normal
620 Nutrition and dietetics
630 Food for the sick
640 Infant feeding
650 Classes of foods
660 Dietary department
670 Health food plans and system

700 Public Health

700 Public Health
710 Organization and administration
720 Communicable disease control
730 Maternity and child hygiene
740 Public sanitation and hygiene
750 Industrial hygiene
760 Special problems and activities of public health administration and practice
770 Public health nursing
780 Health services
790 Voluntary agencies

800 Philosophy and Religion

800 General works on philosophy religion
810 Philosophy
840 Religion

900 General Culture

900 General culture
910 Literature
920 Biography
930 Geography
940 History
950 Travel
960 Fine arts
970 Practical arts
980 Esthetics

Pharmacy

The Eli Lilly Company Library Indianapolis, uses a system (23) devised by a scientist in 1915 Irene M. Strieby the Librarian, writes "Although there are many discrepancies and no mnemonic features, it is simple to remember keeps subjects together on the shelves and, because of no decimal arrangement, provides for easy lettering on spines of books. Business books are fitted into the plan by use of the letter Y General books conform to the scheme through the use of the letter Z with the appropriate Dewey Decimal classification number disregarding any expansion with decimals. The letter X is being considered for use in the classification of archival material. The scheme is in process of continuous revision. At the present time, revision of portions of the letters D and S are being considered."

The scheme is given in outline followed by detailed tables and a good index. It has proved equal to the demands made on it for expansion, although a few tight spots are developing. The main divisions are as follows [1]

A General Science
B Mathematics and Physics
C Chemistry
D Medicine
E Bacteriology
F Hygiene and Public Health
G Geology
H Hospitals and Nursing

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I Bibliography
J Veterinary Medicine
K Photography
L Library Science
M Microscopy
N Zoology
O Human Anatomy
P Botany and Pharmacognosy
Q Genetics, Biology and Natural History
R Agriculture
S Pharmacology Materia Medica and Therapeutics
T Pharmacy
U United States Laws and Regulations, Patents and Government Documents
Y Business
Z Miscellaneous (followed by a Dewey Decimal number carried to 3 places only)

Class S, Pharmacology Materia medica, and Therapeutics, is developed as follows

(NOTE *Books treating on two or more of these subjects place in class of subject appearing first in title*)

S4 Pharmacology—Periodicals
S10 Pharmacology—Reference and textbooks
S15 Pharmacology—Drug encyclopedias
S20 Pharmacology—Handbooks
S25 Pharmacology—Experimental (drug action)
S30 Pharmacology—Laboratory guides
S35 Pharmacology—Clinical use, etc.—Special topics (e.g *ergot*)
S40 Drugs—Use and abuse (see also Narcotics—D340· S130, Drugs administration)
S45 Pharmacology—Constitution, chemistry etc. of limited list of drugs
S50 Drugs—Standardization
S60 Drugs—Lists by name only
S75 Toxicology
S80 Toxicology—Special subjects
S100 Materia medica—Reference and textbooks (see also P336, Medicinal plants—References and textbooks)
S104 Materia medica—Periodicals
S105 Materia medica, Organic (See also C200–C448)
S110 Materia medica, Organic (Foreign countries)
S120 Materia medica, Inorganic (i.e. metallic drugs not included in chemotherapy)

- S125 Materia medica (commercial) (see also S300, Therapeutic manuals, where emphasis is on drug products, commercial T10, Pharmaceutical firms—Publications)
- S130 Drugs—Use, administration
- S140 Materia medica—Homeopathic
- S150 Materia medica—Eclectic
- S200 Therapeutics—Reference and textbooks
- S204 Therapeutics—Periodicals
- S205 Therapeutics—Manuals and guides (see S300, Therapeutic manuals, where emphasis is on drug products, commercial)
- S208 Therapeutics—Terms
- S215 Therapeutic societies—Transactions
- S240 Drugs (*Biologicals*)
- S250 Chemotherapy
- S275 Chemotherapy—Specific drugs (e.g. Dextrose therapy)
- S285 Antibiotics
- S300 Therapeutic manuals (where emphasis is on drug products, commercial)
- S335 Therapeutics—Special topics
- S350 Therapeutics—History

Class T Pharmacy is developed as follows

- T4 Pharmacy—Periodicals (List here drug journals not dealing primarily with pharmaceutical chemistry)
- T8 Pharmaceutical associations—Yearbooks
- T10 Pharmaceutical firms—Publications
- T12 Pharmacy—Dictionaries and encyclopedias
- T16 Pharmaceutical arithmetic (see also B5 Mathematics and arithmetic—Reference and textbooks)
- T20 Dispensatories (Arrange on shelf by country)
- T28 Pharmacy—Reference and textbooks
- T36 Pharmacopoeias (Arrange on shelf alphabetically by entry)
- T40 Pharmacopoeias—U. S. Conventions
- T45 Pharmacopoeias—Summaries of
- T52 Formularies, Official
- T72 Formularies, Miscellaneous and receipt books
- T80 Summaries of official formularies and pharmacopoeias
- T92 Pharmacy—History and biography including alchemy
- T94 Pharmacy schools—History
- T99 Pharmaceutical products—Price lists
- T100 Pharmacy Manufacturing—Catalogs
- T105 Pharmacy—Manufacturing
- T110 Pharmaceutical products—Elixirs
- T115 Pharmaceutical products—Tablets
- T117 Pharmaceutical products—Solutions

T118 Pharmaceutical products—Solid extracts
T119 Pharmaceutical products—Fluid extracts
T120 Flavoring extracts
T122 Suppositories
T124 Pharmaceutical products—Ointments
T138 Pharmaceutical chemistry—Periodicals
T140 Pharmaceutical chemistry—Reference and textbooks
T145 Reports—Chemical laboratories, A.M.A., etc.
T150 Pharmaceutical education
T160 Quiz books and compends
T200 Pharmaceutical research
T215 Pharmaceutical products development
T250 Commercial pharmacy—Retail
T251 Commercial pharmacy—Wholesale
T275 Druggists—Directories

Psychology and psychiatry

An interesting classification scheme for a psychological library was devised by Chauncey M. Louttit for a 12,000 volume departmental library of the University of Indiana in 1941 (24). Notation is a combination of letters and numerical decimal divisions. The major divisions of the subject are allotted to the first 13 letters of the alphabet, the subdivisions are decimals. The main divisions are as follows:

A General works
B Sensation and perception
C Reaction, response
D Cognitive activities
E Affective activities
F Personality
G Abnormal psychology
H Social psychology
I Applied Psychology
J Child psychology
K Animal behavior
L Biological science
M Science

Abnormal psychology (G) is subdivided as follows:

G 00 Abnormal psychology: psychiatry
01 classification, general 02, diagnosis, general 03, etiology general 04 symptomatology general 05 research in general 07 relations, social, etc. 09 pathological states (not otherwise classified)
G 10 Mental deficiency: feeblemindedness
G 20 Clinical Neurology
G 30 Somatic psychoses
G 40 Psychoneuroses
G 50 Schizophrenia
G 60 Manic-depressive psychosis
G 70 Paranoia and paranoid conditions

G 80 Therapeutics and care
G 90 Clinical psychology and mental hygiene

Social psychology (H) is subdivided as follows

H 00 Social psychology
H 10 Sociology
H 20 Anthropology ethnic psychology
H 30 Religion
H 40 Family
H 60 Social pathology social work
H 70 Criminology
H 90 Social sciences

Although there are comparatively few extensive collections devoted to psychology which are so completely independent as to make possible the use of a special classification such as this, the completeness of its tabulations of divisions, subdivisions and related subjects, by an authority in this field, will be most suggestive in the necessary expansion of other systems of classification. The subdivisions as given in the author's article have been much further divided by him, but exist in manuscript only An index adds to the value of the scheme.

In the Bliss classification (6) Louttit assisted in the development of Psychology incorporating much of his original work published in 1941 (24) The Bliss notation is based mainly on letters and therefore is simpler and briefer In Medical Science, Subclass HM-HZ, under Pathology Section HP the subjects relating to nervous disorders and diseases are developed in considerable detail in subsections HPS-HPU In Class I Psychology especially in Section IM, Psychiatry (including Psychopathology) there is alternative provision for most of these details. This section is reproduced herewith

IM Psychiatry (including Psychopathology) Mental Disorders and Diseases.

Nervous disorders and diseases are included by psychiatrists, but Medical Science has prior claim to them; so both alternatives are provided for in this classification. Psychiatry is often regarded as branch of Medical Science. It is also, of course, branch of Applied Psychology The term *Psychopathology* if used in analogy to Pathology in Medical Science, would denote the study of the nature, diagnosis, aetiology and conditions of mental disorders and diseases. Psychiatry has comprised, besides the subject matter of Psychopathology the studies of treatment, remedies, and care, for which the term Psychotherapy is used in analogy to Therapeutics in Medicine.

IMG Psychotherapy
IMI Institutions, Hospitals, for Psychopathology for Psychopathic patients.
IMK *Alternative for Nervous Disorders and Diseases Neuropathology preferred under Medical Science in HPS*
IMKS *For Clinical Neurology an alternative is provided in HPSB*

IML *Alternative for Spinal-cord Diseases preferred in HPT*
IMM *Alternative for Brain Disorders and Diseases preferred in HPU*
IMN Neuroses, Psychoneuroses and Psychoses.
IMNA Functional Neuroses.
IMO Psychoneuroses (Neuropsychoses)
IMP Psychoses.
IMQ Schizophrenia, Dementia praecox. Schizoid personality
IMR Manic-depressive psychoses.
IMS Paranoia (Insanity in the narrower sense)
IMT Toxic Psychopathology
IMU Disorders and diseases of personality Dissociation.
IMV *Alternative for Disorders of the Memory preferred in IFCP*
IMW *Alternative for Disorders of Will and Emotions better in IEW*
IMY Mental disorders and diseases of Old Age. Others not provided for above.
J Education.
K Sociology

Another interesting scheme for psychiatry is that planned by J S. A. Miller (27) for the Rockland State Hospital Library Orangeburg, New York. The classification has 15 class units the classification tables are numbered 1–15 and are expanded by decimal notation. In order to provide for material pertinent to psychiatric hospital libraries, classes 10–14 have been developed to cover the fields of neurology psychology psychiatry psychoanalysis, and psychotherapy The main divisions, with the subdivisions of classes 11–14 are as follows [*]

00. Library classification and economy
0. Medical reference, including dictionaries, indices, medical history medical ethics and practice, hospital organization and nursing
1 General and biological sciences, including physics, chemistry biology and biometry
2. Medical and pre-clinical sciences, including anatomy physiology pathology and bacteriology
3. Medical examination and diagnosis, including physical diagnosis, laboratory medicine, electrodiagnosis and radiology
4 Clinical medicine, including internal medicine, pediatrics, geriatrics, obstetrics, infectious and allergic diseases, etc.
5 Systematic medicine including diseases of the chest, the heart, the digestive system, etc and hematology dermatology neuropsychiatry and diseases of eye, ear nose, and throat
6. Surgery including general texts, minor surgery operative techniques, regional and systematic surgery and dentistry

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7 Medical treatment including dietetics, pharmacology physiotherapy and psychotherapy
8. Hygiene and public health, including mental hygiene, preventive medicine, industrial and disability medicine, medical jurisprudence, toxicology and war medicine
9 Social service and medical sociology including family and community welfare, sexology social pathology and social hygiene
10. (or 15) General reference, including general dictionaries and encyclopedias, history religion, philosophy law languages, fine arts and applied sciences

For psychiatric hospital libraries place "General Reference under 15 and add the following items

10. Neurology
11. Psychology historical and general
  .0 Dictionaries and encyclopedias
  .1 Textbooks of psychology
  11 Textbooks of mental philosophy and metaphysics
  .13 Textbooks of physiological psychology
  15 Textbooks of dynamic psychology including reflexology hormic psychology and gestalt
  .2 Animal, comparative and experimental psychology
  .3 Psychology of special topics
  .31 Instinct and habit
  .32 Intellection
  .33 Emotion, affect and feeling
  .34 Speech and expression
  .35 Work and fatigue
  .36 Sleep and dreams
  .37 Mental states of unconsciousness
  .39 Total personality
  4 Child and developmental psychology (See also Child psychiatry 12.8 and Child analysis, 13.8)
  41 Psychology of infancy
  43 Psychology of school age children
  45 Psychology of adolescence
  .5 Educational psychology
  .6 Clinical and applied psychology (General)
  .61 General textbooks
  .62 Intelligence tests, verbal
  .63 Performance tests
  .64 Remedial educational psychology
  .65 Projective and apperception tests including the Rorschach test, the Murray test, etc.
  .66 Vocational tests

.68 Business psychology
.69 Statistics and measurements in psychology
.7 Psychology of sex and love
.8 Social psychology
.9 Military psychology

12. Psychiatry and psychobiology (including Medical psychology and Child psychiatry)
.0 Dictionaries and encyclopedias
.1 Textbooks of clinical psychiatry
.11 Synopses, compends and outlines
.15 Examination and diagnosis
.2 Psychopathology (Abnormal psychology)
.3 Organic dementia syndromes and psychoses
.4 Psychoneuroses and affective psychoses
.41 Anxiety neuroses and hysteria
.42 Obsessive-compulsive neuroses
.44 Traumatic neuroses
.46 War neuroses
.48 Manic-depressive psychoses
.49 Involutional psychoses
.5 Dementia praecox (schizophrenia) and paranoia
.51 Paranoia and paranoid conditions
.55 Schizophrenias (dementia praecox)
.6 Psychosomatic Medicine (textbooks)
.61 Physique (constitution) and character
.63 Emotion and physical disease (general)
.65 Emotional states in specific physical diseases
.7 Mental deficiency psychopathic states and forensic psychiatry
.71 Mental deficiency and feeblemindedness
.75 Psychopathic states (moral imbecility) including alcoholism, drug addiction, and pathological sexuality (perversions)
.77 Crime and mental illness
.79 Legal or forensic psychiatry
.8 Child psychiatry and child guidance
(See also Child analysis, 13.8 and Psychotherapy 14)
.81 General textbooks
.82 Emotional and behavior problems
.83 Neuroses and affective psychoses in children
.84 Schizophrenia in children
.85 Organic mental syndromes in children
.86 Mental deficiency in children
.87 Psychopathic states and juvenile delinquency
.89 Child guidance and psychotherapy
.9 Etiology research, statistics and mental hygiene

.91 Etiology of mental illness
.93 Research in mental illness
.95 Statistics of mental illness
.96 Military psychiatry
.99 Preventive or orthopsychiatry and mental hygiene

13. Psychoanalysis (historical & general)
.0 Dictionaries and encyclopedias
.1 The works of Sigmund Freud
.2 General presentations by other (classical Freudian) psychoanalysts
.3 Derivative or related schools of psychoanalysis
.5 Psychoanalytical psychology and psychopathology
.51 Libido theory of the neuroses
.52 Ego and its development
.53 Defense mechanisms
.55 Psychopathology of everyday life
.57 Psychology of women
.6 Psychology of special mental syndromes
.61 Anxiety neurosis and hysteria
.62 Compulsion neurosis
.63 Sex perversions
.64 Character defects
.65 Psychopathic states, including the addiction to alcohol and drugs
.67 Manic-depressive psychoses
.68 Schizophrenia (dementia praecox)
.7 Psychoanalytic technique
.71 General works on classical technique
.72 Hypnosis and catharsis (hypnoanalysis)
.73 Free association
.74 Dream interpretation
.75 Transference problems
.78 "Self-analysis
.79 "Shorter and active techniques
.8 Child analysis and related topics
.9 Applied psychoanalysis in the fields of
.91 Anthropology
.92 Art, literature and creative functions
.93 Criminology and penology
.94 Education and pedagogy
.95 History and sociology
.96 Medicine and therapeutics
.97 Psychology
.98 Religion and myths

14 Psychotherapy (other than psychoanalysis)
.0 Dictionaries and encyclopedias

.1	General textbooks
.2	Individual psychotherapy
.21	Psychotherapy in medicine
.22	Interviewing and counselling
.23	Hypnotism and suggestion
.25	Religion and ministering to the ill
.3	Group psychotherapy
.31	Occupational therapy
.32	Recreational therapy
.33	Actual group therapy
.35	Psychodramatic therapy
.4	Physical, shock and surgical therapies
.41	Physical therapy and physiotherapy
.42	Pharmacological therapy
.43	Sedation and sleep therapies
.44	Fever or pyrexial therapies
.45	Insulin shock therapy
.46	Convulsive shock therapy
.49	Psychosurgery
.6	Other mental treatment in general and psychiatric hospitals
.7	Psychiatric nursing and attendants
.9	Psychiatric convalescence and rehabilitation
.91	Pre-convalescent procedures
.92	Clinical therapeutic teams
.93	After-care or convalescent clinics
.94	Family care placement
.96	Colony care and management procedures
.97	Community inter-clinic relations
.99	Post war psychiatric rehabilitation

Public health

The following classification on public health is used in the National Health Library of the National Health Council [*]

000	General works (Transactions, laws, etc.)
100	Sociology
200	Public health
210	Psychiatry
212-14	Mental diseases
215-19	Mental deficiency
220	Social hygiene
230	Communicable diseases
231	Venereal diseases
232	Tuberculosis
240	Non-communicable diseases
250	Public health nursing
260	Industrial hygiene
270	Public sanitation
290	Health services, clinics, etc.
300	Personal hygiene
400	Child welfare
500	Education
510	Health education

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520 Sex education
550 Nurses and nursing
600 Medicine
606 State medicine
630 Therapeutics and materia medica
640 Toxicology
700 Science
710 Psychology
715 Applied psychology
716 Tests
720 Biology
730 Physiology
740 Anatomy
750 Chemistry
760 Physics
770 Anthropology
780 Bacteriology
790 Philosophy
800 Religion and ethics

Decimal subdivisions of some of the sections go as far as three points. As an example, the main subdivisions of Tuberculosis (232) are

232 Tuberculosis
  .01 Popular literature
  .05 Education
  .1 Treatment
  .12 Sanatorium treatment
  .13 Home treatment
  .14 Open air treatment
  145 Colonies
  15 Rest and exercise
  .2 Pathology
  .3 Nursing
  4 Research
  .5 Economic and social aspects
  .6 Special classes (children, etc.)
  .7 Animal tuberculosis
  .8 Sanatoria
  .9 Prevention, publicity etc.
  .92 Organization, associations
  .922 Christmas seals
  .99 By country

Another classification for a public health library is the section on health and sanitation in a code which was developed by Sophia H. Glidden and Dorothy Marchus (19) from a classification for political science collections. These tables were devised in their original form in the Bureau for Research in Government of the University of Minnesota in the classification of their own library The notation of the system is based on letters rather than on figures. The section devoted to public health is designated by the letter O

O Public health
  1 Health services
    11 Medical service
    12 Public health officers
    13 Hospitals Health institutions
    14 Clinics and dispensaries Health centers
    18 Dental service
  2 State control of health agents and agencies
    21 Regulation of practice Licensing and examination of candidates
    22 Regulation of instruction Standards of preparation

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24 Regulation of policies and procedures
3 Pathology Disease control
31 Physical and medical examinations Psychological and psychopathic examinations
32 Non-communicable diseases and afflictions
33 Communicable diseases Epidemiology
35 Mental and nervous disorders and deficiencies Mental hygiene
36 Occupational diseases and poisons
38 Therapeutics Convalescence
39 Medical climatology
5 Sanitary inspection and regulation
51 Public places and conveyances
52 Manufacture and sale of products
55 Barbers and beauticians
57 Prevention of risks and hazards
6 Sanitary inspection and regulation of foods and drugs
62 Drugs
63 Milk
64 Meat Meat products
65 Food shops and factories
66 Restaurants
69 Food preservation
9 Public health programs Health education Hygiene
92 Maternal and infant care
95 Child health
96 Nutrition
97 Eugenics Birth control
98 Personal hygiene
99 First aid in illness and injury

In the general table the section on Health (O) stands between National defense and law enforcement (N) and Recreation and commercialized amusements (OA) A closer relationship to Welfare, dependency social insurance and crime (Q) would be advantageous. The use of this classification in a public health library where no medical library is available would necessitate extensive expansion of the sections dealing with pathology and disease control.

The Industrial Hygiene Foundation of the Mellon Institute is a research association of industries for advancing industrial health and improving working conditions. The classification system used here was compiled in 1936 by Lorraine Sullivan and W C. L. Hemeon (35) from a system that Manfred Bowditch had formulated for the Division of Occupational Hygiene, Massachusetts Department of Labor and Industries. The

classification has been modified and expanded as needed specialists in the various fields represented will find it easily expandable as new aspects develop An extensive index increases its usefulness for those unfamiliar with the industrial hygiene specialties. A general outline of the classification follows [illegible]

Number	Subject
005	Periodicals
010	Encyclopedias, dictionaries, etc.
013	Bibliographies, general. (See also 396, 712)
015	Directories. (See also 403)
017	Trade catalogs
020	Maps—atlases
027	Patents
029	Industrial standards, codes and recommended practices, general
030	General statistics
	Vital statistics, death causes, etc. (See also 382, 392, 720.4)
035	General reports, miscellaneous. (See also 393, 711)
040	Photographs
042	Personalities (industrial hygiene and medicine)
055	General law and legislation
056	Social legislation, general. (See also 495) (For laws on health and safety see 440–460)
057	Sickness indemnification
060	General science
	Botany zoology etc.
070	Physics
090	Microscopy crystallography and petrography (See also 661)
095	Photography
100	Medical science
	Textbooks, encyclopedias
105	Public hygiene and sanitation. (See also specific industry 210–380, 226–227; For Law see 443)
115	Bacteriology
120	Toxicology general. (See also specific poison, 500–600)
123	Pathology general
125	Diseases, non-occupational
	Tuberculosis, Arthritis, and Senescence. (See also 475)
130	Anatomy and physiology
133	Body metabolism. (See also 605 and 453)
135	Respiration and voice. (See also 405.5)
140	Gastro-intestinal, digestive system
142	Blood and circulatory system

[illegible] Reproduced with the kind permission of the Industrial Hygiene Foundation, Mellon Institute, Pittsburgh.

144 Genito-urinary system
145 Nervous and muscular systems
146 Senses, odors. (See also 605 606)
149 Integuments
150 Pharmacy (See also 267)
160 Geology and mineralogy
180 Engineering general. (See also 105 385 409 600)
200 General chemistry
201 Analytical chemistry (See also 741)
205 Inorganic, general
206 Organic, general
207 Physical, general
210 Industries, trades and manufactures

(This entire section, 210-380 is to be used for data on the *industries* and occupations making a given substance descriptive, technological, statistical or other general information. Properties of products, excepting toxic properties, will also be included. For such hazards associated with a *specific substance* see 500-600)

390 Industrial hygiene and medicine, general
400 Medical control, general
440 Laws and regulations for industrial health and safety (See also 470 and 105)
450 Insurance and compensation laws
460 Protective devices
470 Occupational diseases and hazards
Medical, chemical and industrial aspects. (See also specific occupation or industry 210-390)
500 Poisons, toxic and chemical properties, general. (See also 120)
600 Industrial ventilation and heating, engineering data. (See also 670 440)
640 Dust—aerosols—general
Physical and chemical nature. (For pathology see specific dust)
650 Dust determination, general methods for air sampling and evaluation of results
670 Dust control. (For engineering data on ventilation methods see 600)
671-75 Air cleaning equipment and technique
676-84 By industries
690 Pneumoconioses, general. (For legal aspects, see 453)
700 Organic dust, general
Pathology physical and chemical nature. (See also Industrial asthma 476 also 388)
710 Silicosis, general. (For legal aspects, see 453 Medical control, 404 Dust control, 670-90)
721 24 Kinds of silica (and industries)

725-35 By industries
750 Silicatosis—silicates
Combined silica. (See also 695)
780 Miscellaneous dust. (See also 695)

Serials and miscellaneous material

Periodicals

The care and arrangement of periodical files are among the most important problems of the medical library since this material constitutes the principal portion of the collection, both as to number of volumes and as to subject matter Periodicals are so constantly used in the reference work of a medical library that their arrangement for quick and easy accessibility becomes a matter of paramount importance in the library s administration.

Although classification systems provide for the assignment of periodical files to a specific subdivision, most medical libraries find it much more feasible to disregard subject classification and arrange them separately from monographs and texts. In shelving they may be arranged alphabetically by title, by country by language, or by subject. In the last three arrangements, titles are alphabetized within a group. If alphabetizing by title, arrangement may be by title entry if distinctive, otherwise under rule of corporate author entry This is the arrangement used in the *Union list of serials* and brings together under the name of the hospital, institution, society or university all bulletins, journals, proceedings, reports, transactions, etc., issued by an organization. The following are some examples of entries

American medical association. Bulletin
American medical association. Journal
Chemical society Journal
Journal of physiological chemistry
Sociedad médico-quirúrgica del Guayas. Anales
Wake Forest college. Bowman Gray school of medicine. Journal

If alphabetized under title, this group of periodicals would be arranged as follows

Anales de la Sociedad médico-quirurgica del Guayas
Bulletin of the American Medical Association
Journal of the American Medical Association
Journal of the Bowman Gray School of Medicine
Journal of the Chemical Society
Journal of Physiological Chemistry

This is the method used for citations in most bibliographic sources and tools. The abbreviated titles of serials, rather than the full title, follow this arrangement in the *Index-Catalogue of the Library of the Surgeon General's Office* the *World list of scientific periodicals* and in the "List of journals indexed" in the *Quarterly cumulative index medicus* The example given below is from the latter index, showing alphabetic changes that occur if abbreviated titles are alphabetized

An. Soc. Med.-quir Guayas
Bull. A.M.A.
J.A.M.A.
J Bowman Gray School Med.
J Chem. Soc., Lond.
J Physiol. Chem.
Jap. J Exper Med.
Journal-Lancet

Some medical librarians advise arranging files of periodicals by title, regardless of country language or subject, and in the general order of the *Union list of serials* In the alphabetic arrangement of periodicals, it is often simpler to disregard such minor words as *for of the* and their foreign equivalents occurring within a title. In case the title of a periodical has changed in the course of its publication, the order of arrangement in the *Union list of serials* may be followed, and the entire file shelved under the latest title, with cross references from former titles or strict alphabetizing may be maintained by arranging each part of the file by the title under which it appeared. The latter method is the most economical from the standpoint of servicing, catalog and shelf list notation, and stack operation. Use of periodical files is usually made by means of exact references from indexes and bibliographies, and such references are made to the title under which a periodical appeared on a given date. Under these circumstances it would seem logical to arrange each portion of a serial under its distinctive title and to shelve it in alphabetic order For bibliographic purposes, the catalog card under latest title may show all former titles with volumes issued, and cross references under each former title may refer to the main catalog entry this method, however is baffling to the library patron and it is more practical to have the catalog and shelf-list entries correspond to the shelf arrangement. It should be remembered that rearrangement of periodical files often involves arduous labor and that ideal arrangement may have to be modified to suit the limitations of overcrowded stacks and insufficient staff

Current periodicals, like bound periodical files, may be arranged alpha

betically by title, by country by language, and by subject. Here, too, most medical librarians advise the simpler method of strict alphabetizing by title. Whatever plan is chosen, the same one should be used for both bound and current periodicals. Posted lists of journals received, grouped by country by language, and by subject, may answer such calls as come from these points of view The new mechanical aids, such as IBM and McBee Keysort cards, can be utilized to provide this information if warranted by the extent of the collection.

Transactions and proceedings

The arrangement of the transactions and proceedings of societies, congresses, and other organized groups constitutes another problem. These serial publications may be treated as periodicals and alphabetized either by the name of the association (or society) or by title. They may be arranged in a separate file following the various patterns referred to under periodicals. The majority of bibliographic references will be to the words *Bulletin of* *Proceedings of* *Reports of* and *Transactions of* preceding the name of the association, clinic, hospital, institution, society or university Where simplicity of arrangement and accessibility for the use of patrons are of prime importance, the simple alphabetizing of these publications by name of the issuing organization, in the same file with the periodicals, would seem to be advisable.

Documents

Documents, in medical as in general libraries, may furnish the most interesting material available on a given subject, but can do so only if they are arranged and cataloged in such a way that the information is available. Federal, state, and city publications are often prepared by specialists and include statistical studies of great value on matters of public health and the control of communicable diseases. Their very multiplicity however makes them difficult to handle in a special collection. It is generally recommended that documents published singly be classified in the book collection under the subjects of which they treat, and that publications issued at regular intervals be treated as periodicals. Some libraries arrange documents published in series with their periodicals under the name of the country state, or city by which they are issued. Certain others arrange them in a separate file by geographic location, and a few classify them in the subdivision allotted for them in the classification system used by the library Considering the rather specialized nature of the subject material, classification by subject would seem advisable wherever possible, for this method simplifies its use by the library patron.

Miscellaneous serials

The reports of foundations and hospitals, health reports, and the collected reprints of universities and other research groups create another difficult problem of classification in a medical library In general, the same rule should apply to these publications as to documents, and they should be classified wherever possible with the subjects of which they treat. The Boston Medical Library classification provides special classes for such miscellaneous reports. The other classification systems, especially those with mnemonic features, usually assign them to subdivisions in the special subject groups. Some libraries consider them to be periodicals and arrange them accordingly No general rule can be made for the care of material of so varying a nature. The simplest method of handling each file should be decided upon in each individual case.

Miscellany

The arrangement of inaugural dissertations, modern manuscripts, and special collections of nonmedical material written by physicians varies with the use made of the material and the scheme of classification used by the library Many libraries classify inaugural dissertations separately cataloging them by author and subject as if they were books. If sufficient personnel is available, this method is ideal. When this is impractical, a simple plan is to arrange them by university year and author with a brief author card as an index to the collection. If theses are kept in this manner as a separate collection, a form symbol is necessary and a call number for individual universities and schools should be assigned to facilitate servicing them. The Armed Forces Medical Library has set up such a pattern of notation to service its vast collection of dissertations. The following is taken from manual sheets and correspondence supplied by the Catalog Division of that library [23]

Academic dissertations submitted to a school or faculty of medicine, dentistry nursing, pharmacy or veterinary medicine, to obtain a doctor s degree or a more advanced degree, will be cataloged for the thesis collection. Form classification W4 or W4A will be applied. Under the form classification used for foreign theses (W4) the Cutter number [24] is assigned which represents the university and the school, e.g.,

B52 Bern (medicine)
B521 (dentistry)

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[24] Note the third figure added to the 2-figure Cutter always designates the same department, e.g. 1 = dentistry 2 = pharmacy 3 = veterinary medicine.

B522 (pharmacy)
B523 (veterinary medicine)

P23 Paris (medicine)
P232 (pharmacy)

Z96 Zurich (medicine)
Z961 (dentistry)
Z962 (pharmacy)

The complete call number for a 1950 Bern medical dissertation would be

W4
B52
1950

Because the theses are arranged in alphabetical order within each year there is no need for further numbering. The call number for a dissertation from a university which issues them in numerical order will show the thesis number instead of the year because the theses in such a case are arranged and bound by number Under the form classification for American medical dissertations (W4A) each title is regularly cuttered from its author s name as the theses are arranged by authors, with no attention to dates or schools.

This arrangement fits the needs and pattern of the Armed Forces Medical Library usage and service. For other library collections modifications would be required. For instance, for the library which does not bind this type of material, foreign university dissertations would need some distinguishing mark for the individual theses published in each year In ar ranging American medical dissertations (W4A) under author rather than under university there is a possibility of long Cutter numbers developing as years go on. One solution for this problem would be to separate American dissertations by date, then to assign a Cutter number for author as in this sample card

W4A Wilson, James G
1950 Posterior bone block of the ankle. Minneapolis, Univ 1950
W694 Thesis—Minnesota.

Any other James G Wilson writing an American medical thesis in 1950 would receive a different Cutter number

If no class is assigned to the nonmedical works of physicians in the library classification chosen, some such class with appropriate subdivisions should be set up, as the formation of such a collection is a source of interest

and inspiration to medical patrons. Likewise a collection of material containing fiction verse and drama depicting the physician in literature is worthy of a special class notation. The *Army Medical Library classification* (preliminary edition) (37) W330–455 section [36] might serve as a pattern for setting up such a collection.

Medicine and physicians in non-medical fields

W330 Medical subjects and physicians as represented in literature, art, etc.
    For Medical travels, *see* W10
  335 Physicians as poets, dramatists, novelists, etc.
  337 Poetry drama, fiction, etc., written by physicians
  338   Poetry
  339   Drama
  340   Fiction
  341   Other
  345 Poetry drama, fiction, etc., depicting the physician
  346   Poetry
  347   Drama
  348   Fiction
  349   Other
  355 Poetry drama, fiction, etc., depicting medical subjects
  356   Poetry
  357   Drama
  358   Fiction
  359   Other
  365 Physicians as artists (painters, sculptors, photographers, etc.) and their art
    See also N Fine arts (for use in general libraries)
  366   Painters, etchers, engravers, etc.
  367   Sculptors
  368   Photographers
  369   Other
  375   Paintings by physicians
  376   Sculpture by physicians
  377   Photographic work by physicians
  378   Other forms of art by physicians
  385 Physicians and medical subjects as depicted in art
  387 Portraits of physicians
    See also W306–7 Caricatures and cartoons
  390 Physicians as musicians, composers, etc.
  395   Musical compositions by physicians
    See also MT Music (for use in general libraries)
  400 Physicians in other non-medical fields
  405   Works of physicians in other non-medical fields

[36] Reproduced with the kind permission of the Armed Forces Medical Library

425 Medical symbolism
Medical philately
For stamps and stamp collections, *see* HE6181–230
430 General
435 Medical stamps and stamp collections
Medical numismatics and medallions
440 General works
445 Collections
Medical book-plates, and their design
450 General
455 Collections

Modern manuscript material and case histories should be classified by subject, their manuscript nature being noted on the catalog card. If no subdivisions are assigned to them in the classification in use, an arbitrary notation should be established. Diaries, letters, ledgers, etc. should form a part of the section on biography and should be arranged by name of the person written about. Such miscellaneous material while difficult to handle adequately may prove of great value as original contributions to a subject if its arrangement makes it easily accessible.

The care of primary and reprinted material in pamphlet form is discussed in Chapter 8 of this *Handbook*.

Conclusions

It is reasonable to suppose that the persons most qualified to judge of the advantages or disadvantages of a classification system are the ones who use it. In this belief, questionnaires were sent to all the 363 libraries on the Medical Library Association Exchange membership list as of December 1951 Replies were received from approximately 43 per cent of these libraries. The conclusions based on these replies must be accepted with some reservations. A limited knowledge of classification plans other than the one in use is rather general. Unfamiliarity with other schemes does not offer serious handicap to a library already organized, but it must be admitted that such a lack of knowledge minimizes the value of advice which these librarians may give as to choice of a system for a newly established library

Most medical libraries reported using the general classification systems are units of a university or public library system classified under such schemes, thereby eliminating possible choice of a more suitable plan. A certain number of the medical libraries returning information stated that at the time the library was originally classified only the general schemes were available and that a change now would be impossible because of ex

pense. The following summaries, therefore, do not present a comparative study of the classification schemes but a brief, impartial analysis of many librarians practical conclusions about them.

The Dewey Decimal classification is reported as easy to use in a medical library being flexible and adaptable to a classed catalog It also has the advantage of familiarity resulting from wide use. The differences between the fourteenth edition and the fifteenth, one being very detailed and the other very compact, have modified its usefulness in the coverage of fields related to medicine for special subject collections. Medical, dental, and pharmaceutical librarians, using it in their narrowly restricted fields, believe it to be too general in its scope and theoretical rather than practical its notation becomes too complicated under the necessary expansion the subject relationships for these fields are deemed poor and the scientific sections of these tables are not adequate for the demands of the collections they classify forcing the individual libraries to develop them on the spot with varying degrees of success.

The Library of Congress system is reported as flexible, expansive, and suited to special collections. Use of printed cards bearing classification numbers and of subject heading lists simplify cataloging and classification by this system. Classification notation is shorter and easier to read than that of the Dewey scheme. Its wide use in university libraries makes it familiar to scholars. It is prepared by specialists in each field. Last, but most important, it is well indexed. It is not recommended for use in a small library however since material would be too widely scattered. Recent revisions in Classes Q and R have added greatly to the usefulness of this classification.

The Boston Medical Library classification is said to be easy to use, simple, and flexible. It is particularly well adapted to a medical collection and is readily understood by those unfamiliar with the complexities of medical terminology The third edition has incorporated expansions in the fields of tuberculosis, dentistry and nursing which round out the schedule quite satisfactorily for a general medical library Its disadvantages are noted as infrequent revision lack of sufficient expansion in certain sections (e.g bacteriology neurology pharmacology) and, in some instances, a poor relation between subjects. The recent edition has alleviated this latter objection to some extent.

Libraries using the Cunningham scheme report it to be flexible and capable of easy expansion, simple to use, up to date, and well indexed. Hospital libraries in particular find it very satisfactory The expansions and realignment of several sections in the recent edition have added greatly to its value.

The Barnard system is used in several English libraries and one small public health library in the United States thus a detailed report on its use is impossible. An examination of the development of subjects in the first edition shows that it is particularly applicable to collections on public health and parasitology the later edition, with its alternative scheme, will allow it to be more widely considered for use in a general medical collection.

The Army Medical classification systems are both liked because of their flexible classification patterns which reflect current trends in medicine and related fields. The principle of classifying under major concept and specific category bringing materials into a logical relationship are most satisfactory The major differences between the two editions are based on functional purposes. The preliminary edition is a detailed scheme, while the first edition is simplified and has amalgamated subject fields to meet the requirements of the Armed Forces Medical Library collection.

The appearance of two editions of a new classification for this collection within a few years has brought the total of classification schemes devised for medical libraries to five the Boston, the Barnard, the Cunningham, the Army Medical Library preliminary edition and the Army Medical Library first edition. The first three classifications are so constructed that nonmedical material can be incorporated without recourse to any auxiliary systems. The Army Medical Library schemes, having been planned originally to supplement the clinical and preclinical schedules of the Library of Congress system, use the other schedules of that system as need arises.

To recommend any one of these systems as the best would be illogical, since the type of collection to which the classification scheme is to be applied should be used as a basis for choice. This is evident from the opinions expressed in the "Symposium on the use of the main classification schemes" (35a) held at the 52nd annual meeting of the Medical Library Association, Salt Lake City June 17 1953. Six librarians, representing medical libraries in universities and large hospitals, presented their experiences and views. Each participant gave a description of the individual library its clientele, its special subject collections, and the services offered Against this background the application of a specific classification was detailed. These nonpartisan presentations indicate that each of these classification schemes has definite advantages or disadvantages influenced by factors pertinent to the library in question.

In conclusion, a final admonition should be given classification is an individual problem for each title in each library The criterion for judgment should always be the placement of every volume where it will be most easily available for use in the library in question, regardless of theoretical precision or classification in any other library Correct placement in

the Library of Congress might be completely inadequate in a medical collection of moderate size. A classification scheme must be selected and used with discrimination and careful judgment the classifier should keep constantly in mind medical library practice, rather than theory for its own sake. As one librarian, using a general classification scheme, so aptly put it in replying to the questionnaire "Make your classification work for you—by that [we] mean to keep it within bounds and not overclassify Know your collections sufficiently well in order to use broad categories for some fields, more specific ones for others." Classification is a means to service, not an end in itself, and the purposes of classification are best achieved when material is so arranged as to be readily available for the use of library patrons.

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chapter 7

Cataloging

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CATALOGING IN A MEDICAL LIBRARY as in a general one, has as its purpose the provision of an adequate index to the resources of the library Such an index must be available for and readily usable by physicians, research workers, faculty members and students, nurses, technicians, library staff members, and any other readers in search of specific information. It analyzes the collection according to author title, and subject content, describes the physical aspects of book or non-book materials, and gives the key which is necessary for the location of individual items. The classification system adopted by the particular library provides this key and systems in use in medical libraries are described in the preceding chapter Library indexes, or catalogs, may be compiled in book, card or sheaf form, but the card catalog is so universally accepted in this country that it is the only form considered here. The card catalog, then, provides an author and subject analysis of textbooks, manuals, monographs, and reference works. It lists reports and transactions of institutions, societies, committees, congresses, and government agencies. These may be foreign or domestic, international or national, state or local. It describes and perhaps lists the contents of *Festschriften* and *Handbücher* types of literature more common in medical than in general libraries. It includes a record of the library's holdings of periodical titles, though it does not, as a rule, index the contents of periodicals. Separate periodical indexes are available for that purpose.

DESCRIPTIVE CATALOGING

The two processes involved in the actual preparation of individual card entries which index the holdings of the library are frequently called descriptive cataloging and subject cataloging The Library of Congress says of descriptive cataloging, "The term is commonly used to distinguish that

part of library cataloging which concerns itself with the identification and description of any item (not limited to books) in the library's collection, from that part which involves the analysis of its subject content." (48, p 1) To provide this identification, it is customary to record certain items of information on catalog cards in a standardized form. Thelma Eaton lists these items "(1) the call number which consists of the class number and the author symbol and serves to locate the book in the collection (2) the author that is the person or organization responsible for the book (3) the title as found on the title page, including references to edition, and possibly containing information relative to other persons who contributed to the book (4) the imprint, that is place of publication, name of publisher and date of publication (5) the collation or physical description of the book, including such items as pagination or volumes, illustrations, and height in centimeters and (6) series note, if any In addition to these six items, some books require a seventh part consisting of notes concerning the materials found in the book or relating to the bibliographical history of the book. (20, p 10)

Cards vary in individual libraries in completeness of form and in such details as punctuation, but the main entry needs the items listed above. This card, also called the author entry is known as a unit card, and present day cataloging makes use of it almost entirely reproducing it and adding headings when necessary to furnish other entries. Simplification of the main entry card is possible. Cataloging of fiction in small public libraries is sometimes reduced to the minimum by giving author and title only It is not advisable in a medical library to simplify the main entry card by omitting any of the descriptive items mentioned. The usual types of material—monographs, textbooks, and reference works—need full analysis otherwise the reader will be hindered in his search for known titles or for satisfactory material on a subject. Rare books and historical material are used in a different way from current material and may require still more complete description as indicated in Chapter 12.

It is not intended that this chapter be a complete textbook of cataloging rather that general cataloging instructions be called to the medical cataloger's attention and that emphasis be placed on those which are of peculiar significance in describing medical material. Each library should adopt some established cataloging code. The currently accepted codes are the *A.L.A. cataloging rules* (3) and the Library of Congress *Rules for descriptive cataloging* (48) C. A. Cutter has said, "Cataloging is an art, not a science. No rules can take the place of experience and good judgment, but some of the results of experience may be best indicated by rules. No code of cataloging could be adopted in all points by every one, because the

libraries for study and the libraries for reading have different objects, and those which combine the two do so in different proportions." (15 p 6, 11) Hence, most medical libraries make changes in the codes and adapt to their particular need the principles set forth in them. The printed codes should be annotated whenever variations from or exceptions to their rulings are made, and such changes should be adhered to closely

It is frequently helpful to see sample cards illustrating rules which are to be followed. Among the publications which contain satisfactory illustrations are the School of Library Service of Columbia University's *Sample catalog cards* (14) Eaton's *Cataloging and classification* (20) *Handbook of card forms for use in cataloging* compiled by R. R. Douglass (18) and *Simple library cataloging* by Susan G Akers (1) Since Douglass was published prior to the 1949 codes of rules, the cataloger should note that it will vary in some details. Eaton furnishes pertinent information on additional cataloging codes, samples, and cataloging textbooks.

Main entries

Of the information on the main entry card, much of which is transcribed from the title page of the work to be cataloged, the author entry is most important. It is the name of the person or the group responsible for the item. If it is a personal author the entry should include the family name followed by the forenames and the dates of birth and death when readily available and if considered necessary These dates are always of importance in distinguishing a writer from others of the same name. In the medical profession there are frequent instances of fathers and sons, or even grand sons, with the same name and sometimes writing on the same subjects. In the early literature there are the Alexander Monros of Edinburgh, the William Heys, and the Heather Biggses. More recently there are the writings of the George Criles and the Richard Suttons. Occasionally there is an extreme instance where distinction between names is necessary such as "the problem of the three Edward Warrens" (32) These were three men with the same name, all living at the same time, all making distinct contributions to American medical literature

Edward Warren (1828–1893) *Bey* a romantic Virginian.
Edward Warren (1804–1878) younger brother of John Collins Warren.
Edward Warren ( ) writing in Boston, 1847 on the subject of ether

The second of the above-named men felt called upon to disclaim publicly authorship of one of the writings of the third. Difficulties in determining correct author entries may be encountered because of compound surnames, names of married women, names in foreign languages, both ancient and

modern, noblemen's titles, etc. Perplexities which arise in such instances may be solved by frequent reference to the *A.L.A. cataloging rules* until, in time, the right forms become part of the cataloger's general knowledge.

Medical literature abounds in publications of which corporate bodies, rather than individuals, have to be considered the authors. Thus publications of governments, proceedings and reports of societies, reports of institutions, conferences, and symposia have the official name of the organization as the author entry. In some works, such as encyclopedias, dictionaries, periodicals, and yearbooks, the title is of more importance than the name of the editor or the writer of the work; hence the title becomes the author entry. The *A.L.A. cataloging rules* provide answers to questions regarding proper entries for these materials.

The title should be reproduced on the main entry catalog card in sufficient fullness for identification, though long titles may be abridged if it can be done without loss of essential information. In describing scientific material, information as to the edition of the work at hand is always necessary and is included as a part of the title. The reasons for giving the imprint on the main entry card are explained in the general statement by the Library of Congress, "The place of publication, name of the publisher and date of publication, which constitute the imprint of a work, serve both to identify and to characterize the work. The place of publication, particularly if it is not a large publishing center, may suggest a probable local viewpoint of the author. The publisher's name may also suggest a viewpoint or bias (especially when the publisher is a society or institution) or may be an indication of the quality either of the subject matter or the physical make-up of the work. The date generally indicates the timeliness of the subject matter." (48, p. 16)

The collation, the description of the physical volume, should include the extent of the work in pages or volumes, important illustrations, tables and other special features, and size if desired. If the work is part of a series of publications being issued under a collective title, a series note to that effect follows the collation. It is advisable to include generous notes covering special points which are not brought out by the transcription of the title. Such notes might include an "At head of title" note, if essential information appears in that position on the title page; statements regarding works bound together or sequels to previous titles, dissertation notes, or contents. "Either all of the contents or a part of them are specified in the catalog entry if it is necessary to bring out important parts of the work not mentioned in the title, or to give a fuller and more detailed description of the contents than the title supplies. Contents are especially necessary for works in several volumes, whether they are single works (with a formal

division of matter that can be described) or collections of works by one or more authors. Bibliographies are noted unless they are obviously of little value. Supplements or other appended matter not printed with the work are always noted." (48, p. 38)

Added entries

Rarely is it possible to index an item in the catalog by a single card, the main entry Readers may not recall the author of the work in question but may remember the name of some other individual connected with it—a second author the editor perhaps the editor of the entire series of publications—or the title. Headings which aid in identifying the item will be needed by all library staff members, particularly those who are asked for verification of information in reference work and in acquisition of materials. It is not possible to formulate a rule regarding the number of extra headings which the cataloger may be expected to provide for an item. Each must be dealt with individually but care should be exercised to avoid overloading the catalog with unnecessary and insignificant headings which do not aid the user in identifying material.

The author entry has been described, but it should be re-emphasized that accuracy and consistency in this entry whether it be for a person or for an organization, are essential. The time spent in making correct author entries is never wasted, nor is it expensive. Rather it is cheaper in the long run than the using of hasty unverified entries would be. Added entries are likely to be numerous in the medical catalog and may be of several kinds. They may be names, representing individuals other than the author who have some connection with the work, such as the joint author editor translator illustrator compiler or sponsoring body They may also be titles, or subjects to analyze the content of books. Since analysis of subject content is one of the purposes of cataloging, it is essential that sufficient, appropriate subject entries be made to cover the topics discussed in the various types of literature in the collection. The form of subject headings, their scope and selection, are considered in the second main section of this chapter The following paragraphs discuss the other types of added entries.

Entries for joint authors, editors, etc.

Joint authors of medical works should always be represented by added entries. The second or third author may have made just as important a contribution as the first, and it frequently happens that another author than the first is better known to the physician or student in search of the book. A publication by numerous authors will generally be known by th[illegible]r's name. As he is often an outstanding person, an added entry

is necessary for him. Sometimes a compiler rather than an editor is responsible for a collection of works by individual authors. In medical literature editors are more common than compilers, but added entries should be made whenever the latter exist. While the name of the translator is of less significance in medical publications than in general literature, it is usually of interest in connection with older works. In early times, translations were often prepared by important medical men, such as those of Galen's works by Thomas Linacre. The work of such translators needs to be recognized in an added entry. Today the translator may be a professional one, interested in an accurate translation but without importance in the field of medicine, in which case no entry is required. On the other hand, it is almost always helpful to include added entries for medical illustrators. Through the years illustrations have been an increasingly valuable part of medical publications, and record of the works of important illustrators is almost as necessary as the works of some of the authors. Many publications by individual authors are sponsored by some organization, such as a government agency, a society, a congress or conference. Additional headings are necessary for such bodies.

Title entries

Title entries are required only for those works bearing distinctive titles. These do not appear as frequently in medical publications as in general literature where novels, plays, and poems have unique titles. Typical in medicine are such titles as *Textbook of general surgery*, *Lectures on the kidney*. Entries for these and similar titles would only result in crowding of cards in the catalog and in confusion in locating material. There are exceptions, for many biographic or historical items have unusual titles. *The horse and buggy doctor*, *Fatal partners, war and disease*, and *Rats, lice and history* are examples. These need separate entries as do others, such as *Hallmarks of mankind*, *The queen of the sciences*, and *Big fleas have little fleas, or Who's who among the protozoa*.

As readers sometimes mistake titles for subject entries, the cataloger must be sure that a title entry will not mislead the user into thinking one title card represents all the material in the library on that subject when actually additional material is available under another word for the subject.

Analytic entries

Besides these added entries, which are for titles as a whole, there are analytic entries, author or subject, which apply to portions of books. Author analytics may be desirable in extensive medical publications such as *Festschriften*, *Handbücher*, similar handbooks or treatises in English, or

under the name by which the conference is best known. Make references from all other forms of name, and from the place where each congress has been held." (3, p 200) A separate entry should be made for each congress giving the number of the congress, place, and date as part of the author entry. The imprint and collation should be stated as for books. Added entries for the sponsoring body, for the editor when important, and for subject entries should be provided. Since these publications may not be completely indexed in the periodical indexes, a small library having little other material on the subject may find author and subject analytics useful.

Serials

Careful attention must be given to the cataloging of serial publications, which form the bulk of the collection in any medical library. A serial may be defined as "a publication issued in successive parts, usually at regular intervals, and, as a rule, intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, etc.) and memoirs, proceedings, and transactions of societies, and may include monographic series and publishers' series." (3, p 233) General rules for describing such material are outlined by the Library of Congress. (48, p. 51-63)

The contents of medical periodicals are indexed in special publications for this purpose, but it is also necessary to have a record of the periodical titles available. Two ways of entering periodicals are suggested. The American Library Association rule reads "Enter a periodical . . . under its latest title. Make a reference or an added entry for any earlier title or titles under which the periodical may have been issued. In the case of a periodical which has ceased publication, make exception in favor of entry under an earlier title used for a much longer period than the later title. A publication which does not continue the volume numbering of an earlier publication is usually considered a new periodical and should have separate entry. A periodical issued by a society, institution, or government body is ordinarily to be entered under its title (especially if this is distinctive in character) with added entry for the issuing body." (3, p 10-11) The Armed Forces Medical Library deviates from this rule as follows "Serials with title changes are entered under their various titles with notes of preceding and continuing titles. This is contrary to the rule of entering under the latest title, but it is a practice which makes for permanency of cataloging. Regardless of title changes (and separate cataloging) a set is considered as a unit as long as its volume numbering is continuous. Its unity is preserved through the use of a form call number under which all volumes are shelved. The use of the form call number makes possible a complete shelf list under the form number. In the cataloging of serials, the Army Medical Library uses title

is necessary for him. Sometimes a compiler rather than an editor is responsible for a collection of works by individual authors. In medical literature editors are more common than compilers, but added entries should be made whenever the latter exist. While the name of the translator is of less significance in medical publications than in general literature, it is usually of interest in connection with older works. In early times, translations were often prepared by important medical men, such as those of Galen's works by Thomas Linacre. The work of such translators needs to be recognized in an added entry. Today the translator may be a professional one, interested in an accurate translation but without importance in the field of medicine, in which case no entry is required. On the other hand, it is almost always helpful to include added entries for medical illustrators. Through the years illustrations have been an increasingly valuable part of medical publications, and record of the works of important illustrators is almost as necessary as the works of some of the authors. Many publications by individual authors are sponsored by some organization, such as a government agency, a society, a congress or conference. Additional headings are necessary for such bodies.

Title entries

Title entries are required only for those works bearing distinctive titles. These do not appear as frequently in medical publications as in general literature where novels, plays, and poems have unique titles. Typical in medicine are such titles as *Textbook of general surgery*, *Lectures on the kidney*. Entries for these and similar titles would only result in crowding of cards in the catalog and in confusion in locating material. There are exceptions, for many biographic or historical items have unusual titles. *The horse and buggy doctor*, *Fatal partners, war and disease*, and *Rats, lice and history* are examples. These need separate entries as do others, such as *Hallmarks of mankind*, *The queen of the sciences*, and *Big fleas have little fleas, or Who's who among the protozoa*.

As readers sometimes mistake titles for subject entries, the cataloger must be sure that a title entry will not mislead the user into thinking one title card represents all the material in the library on that subject when actually additional material is available under another word for the subject.

Analytic entries

Besides these added entries, which are for titles as a whole, there are analytic entries, author or subject, which apply to portions of books. Author analytics may be desirable in extensive medical publications such as *Festschriften*, *Handbücher*, similar handbooks or treatises in English, or

volumes of collective biography As some of these are not completely indexed in any medical bibliographies, and some have monographic sections by outstanding authorities not published in any other form, the author analytic in the catalog may be the only means of locating valuable material. Subject analytics are needed whenever the subject entry for the whole volume does not cover all the material in the individual contributions. They are desirable when (1) the text is concerned with an unusual subject on which literature is not easily obtainable, (2) the library has no other material on the subject, (3) the subject is of local interest, (4) the subject is of historical value for example, when it is the first publication of certain data, like the initial account of the discovery of insulin by Banting and Best.

Series entries

Series entry cards are usually made for monographic series, which include subject series, university publications, government series, and those supplementing periodicals. Examples are *American Chemical Society monograph series Hertzler s monographs on surgical pathology University of Iowa studies in child welfare* Entries may be omitted for publishers series which are usually unnumbered separate works related in subject matter issued in a uniform style, and with a collective title.

Cross references

Cross references are necessary guides in any library catalog. Their function is "to direct the user of a catalog from one of several headings under which an entry might be looked for to the one adopted (*see reference*) or to indicate other headings under which related material may be found (*see also reference*)" (3, p. 221) Compound surnames, surnames with prefixes, unused forenames, forenames with variants, compound forenames, changes in name for political or social reasons or by marriage, differences in spelling resulting from transliteration of names from the Russian and other Slavic languages, changes in names of corporate bodies —all present problems in proper entry Once an entry has been adopted it is essential that cards be made from all unused forms to the accepted one.

Tracings

Each main entry card should include a tracing of all secondary entries which have been made for the title. This tracing may appear on either the front or back of the card, in paragraph or columnar form. The Library of Congress suggests that subject headings be listed first, followed by added entries for persons or corporate bodies, entries for persons generally appearing first, then title, and finally the series entry (48, p. 41)

Shelf-list cards

A shelf-list card, a copy of the unit main entry must be made for each work. These cards include a listing of the copies or volumes of a title which are available. Filed by call numbers, they become the catalog of the library's resources in the order in which the volumes stand on the shelves.

Types of material

Textbooks, monographs, etc.

The cataloger in a small medical library may have few complex materials with which to deal, but there are some which deserve special mention. Most textbooks and monographs need the same sort of description as in a general library. However, there are some textbooks, edited by one individual but consisting of contributions from numerous authors, for which it may be desirable to prepare author and subject analytics. An example is *A textbook of surgery by American authors* edited by Frederick Christopher. Subject entries need to be made for the names of men included in many collective biographies, always for the biographee in an individual biography and usually for a bibliography of the writings of an individual. It has previously been mentioned that contents listing and author and subject analysis may be desirable for *Festschriften* and *Handbücher*. Most medical libraries will have a few rare titles and some volumes of historical interest, but incunabula are seldom found except in the largest ones. Chapter 12 includes discussion of the cataloging of these special types of material. Dissertations need a brief note indicating the institution to which the dissertation was presented and the degree for which the author was a candidate. Reference books, such as encyclopedias and dictionaries, do not often require special treatment.

International congresses

Description of the publications of international congresses pre[illegible] some problems. Since the meetings of these international groups are [illegible] in different countries, usually at long intervals, and under the super[illegible] of different officers, their publications appear irregularly and var[illegible] guage, style, title and format. The American Library Association [illegible] ing the entry of such publications is, "Enter international me[illegible] ferences, and congresses, of private persons, under their E[illegible] provided the English name has appeared in any of the pub[illegible] conference. In other cases enter under the name in the la[illegible] most of the publications have appeared, or when this can[illegible]

under the name by which the conference is best known. Make references from all other forms of name, and from the place where each congress has been held." (3, p 200) A separate entry should be made for each congress, giving the number of the congress, place, and date as part of the author entry The imprint and collation should be stated as for books. Added entries for the sponsoring body for the editor when important, and for subject entries should be provided. Since these publications may not be completely indexed in the periodical indexes, a small library having little other material on the subject may find author and subject analytics useful.

Serials

Careful attention must be given to the cataloging of serial publications, which form the bulk of the collection in any medical library A serial may be defined as "a publication issued in successive parts, usually at regular intervals, and, as a rule, intended to be continued indefinitely Serials include periodicals, newspapers, annuals (reports, yearbooks, etc.) and memoirs, proceedings, and transactions of societies, and may include monographic series and publishers series." (3 p 233) General rules for describing such material are outlined by the Library of Congress. (48 p 51–65)

The contents of medical periodicals are indexed in special publications for that purpose, but it is also necessary to have a record of the periodical titles available. Two ways of entering periodicals are suggested. The American Library Association rule reads "Enter a periodical under its latest title. Make a reference or an added entry for any earlier title or titles under which the periodical may have been issued. In the case of a periodical which has ceased publication, make exception in favor of entry under an earlier title used for a much longer period than the later title. A publication which does not continue the volume numbering of an earlier publication is usually considered a new periodical, and should have separate entry A periodical issued by a society institution, or government body is ordinarily to be entered under its title (especially if this is distinctive in character) with added entry for the issuing body" (3, p. 10–11) The Armed Forces Medical Library deviates from this rule as follows "Serials with title changes are entered under their various titles with notes of preceding and continuing titles. This is contrary to the rule of entering under the latest title, but it is a practice which makes for permanency of cataloging Regardless of title changes (and separate cataloging) a set is considered as a unit as long as its volume numbering is continuous. Its unity is preserved through the use of a form call number under which all volumes are shelved The use of the form call number makes possible a complete shelf list under the form number In the cataloging of serials, the Army Medical Library uses title

entries freely" (33, p. 29) Choice between these two forms of entry depends to some extent on whether the library classifies its periodicals or shelves them alphabetically according to title.

The publisher may usually be omitted from the imprint for periodicals but the place is often important because it is the chief means of identification for similar titles. It may not be feasible to record the library's volume holdings of periodical titles on each main catalog card, but some direction should be included on that card to the place where the information may be found, such as "See shelf list," "For volumes in library consult desk assistant," or "Ask for volumes desired."

Notes on catalog cards for serials are important. Types of information which may be included in them are frequency of publication previous titles, including volumes and dates under each title editors, with volumes and dates of editing organ of society or founders of journal dates of suspensions, "ceased publication with," "merged into, or "superseded by" indexes supplements inclusions of other publications of society or societies, as *Verhandlungen* Transactions, *Berichte* Reports, *Comptes-rendus* Proceedings, etc. lists of society members portraits of members. Connection with previous and succeeding titles should always be shown by notes, which should also give information regarding supplements or extra numbers, suspension or cessation of publication.

An added entry may be made for the editor if the journal is known by his name or if he has been editor over a long period of time. A similar entry may be provided for the sponsoring body or for the society or organization whose publications are regularly to be found in it. Appropriate subject entries should cover the general subject fields of the periodical.

It is sometimes considered advisable to have a separate catalog of periodical and serial material, but unless the library is a large one with an entirely separate periodical room or section, this would not seem necessary The records for serials may easily be included as an integral part of the public card catalog Some libraries may prefer to keep the information on the catalog cards for serials at a minimum and to develop a more extensive and complete serial record file (or shelf list) of another sort, perhaps a visible or rotary record file.

Serials other than periodicals may be similarly cataloged Publications such as yearbooks and directories are entered under title and need descriptive information similar to that given for periodicals. Except for the form of entry the same is true of proceedings or transactions of meetings of societies and institutions. Publications of a society are entered under its latest corporate name, while publications of institutions are entered under the name of the place in which they are located. (3, p. 148, 151)

Government documents

Most medical collections, unless quite large, will contain comparatively few government documents, especially foreign ones. Margaret Mann describes government documents in a way which minimizes the difficulties in cataloging them

> Many government documents are very similar to other books. They happen to be published, not by an individual publisher but by countries, states, cities, or towns. Some are issued in various editions and made up into somewhat involved series, but when these details have been ferreted out, many of them can be cataloged according to the rules for the average book or series.
>
> The first thing for the student to remember is that an official publication of a government is entered under the name of the place. The United States, for example, is the author of its official publications its name corresponds to the family name in personal entries. Subdivisions are used after the place name these are the departments, bureaus, and important divisions from which the documents emanate, e.g U S Department of Agriculture.
>
> If the publication issued by a department or bureau is not in the nature of an official report, but has been prepared by some expert either within or outside of the government service, he is considered the author (28, p. 125)

Technical report literature, used by government agencies and to some extent by industrial firms for the quick dissemination of information concerning scientific research, much of which is government-sponsored is of less concern to medical libraries than to many other scientific and industrial libraries. Many of these reports, which are voluminous in number are reproduced by some other method than printing may be hastily written, and are not intended for permanent use, but will later be published in full in scientific periodicals or books. They are frequently subject to restricted use because of government security classification. A limited number of these reports will be found in small medical libraries and some, such as occasional titles issued by the Atomic Energy Commission, will be necessary The library may decide to treat them as vertical file material or to catalog them fully If they are completely cataloged, close attention needs to be paid to the identification of the author which is usually corporate rather than personal to recognition of all agencies concerned in the research project to the security classification, and to the report number (21)

Pamphlets, etc.

The treatment of miscellaneous types of material, such as pamphlets, reprints, and school announcements, is determined by the use to be made

of it in each library If pamphlets are important enough in subject matter to be kept permanently perhaps to be bound, they are cataloged as fully and as carefully as books. Similarly reprints of valuable articles, not available in the library in periodical form, or of special local interest, are completely cataloged with a note indicating the original source. Suggestions for the treatment of this material are made in Chapter 8.

Audio-visual materials

When audio-visual materials began to invade libraries as integral parts of their collections, apprehension arose as to the difficulties involved in cataloging these items which seemed to be so different from books and periodicals. Elaborate schemes were devised to describe microfilms, lantern slides, photostats, pictures, maps, diplomas, sound records, exhibit materials, etc. Experience has shown that, while the physical handling and arrangement of such materials do present special problems (see Chapters 8 and 9) they can and should be cataloged in a comparatively simple fashion. Standard catalog cards may be used satisfactorily These items, like books, need a call number whether it be a classification number or a symbol, perhaps initials, designating the type of material. They need an accurate, complete main entry to provide proper identification, sufficient added entries to explain relationships with individuals or organizations—for example, the company which produces a motion picture film—and they need adequate subject entries. Generous notes are needed to explain peculiarities of the item at hand. R. L. Collison discusses the cataloging of these materials at length, and says, "Cataloging of special material in a special library must be based on the following points (1) why is it in the collection? (2) who is likely to use it? (3) what information is he likely to want about it? (4) what items should be contained in the catalogue entries in order that the reader may get a clear and accurate idea of whether he wishes to see it, without actually handling it? (5) what is the most convenient, clear and economic way in which this information can be presented? (13, p 3-4)

Photographic reproductions of books and periodicals—that is, photostats, microprints, microcards, or microfilm copies—are cataloged in the same manner as the works which they reproduce. The Library of Congress indicates notes which may be helpful in describing them (48, p. 97-100) Other audio-visual aids may be indexed according to the suggestion of L. J Sherwin

First consideration then is that the title entry be the main entry and that subject headings are plentiful. The following information is useful on a catalog card

Classification number

AV" designation, if needed to aid in filing

Title entry
Author or
Source of material
Date
Designation of type of material as Film, film strip, chart, etc.
Designation of running time of films
Designation as to whether film is sound or silent
Designation of size where applicable, as with charts
Description, in paragraph form (36, p 104)

Practically every medical library has some pictorial material of which the major portion is apt to be portraits. Adequate listing of this material will be well worth the time involved in the process. The methods followed in indexing the large collections at the New York Academy of Medicine (52) and the Armed Forces Medical Library (9) may be adapted for use in any small library Lantern slides need careful attention to provide, through the main entry proper identification of the originals from which they were prepared. The cards for pictures and slides could be made more useful if the library were able to include on them miniature prints of the items. Such prints, available through microfilming would make it possible for the user to select required material without handling the items themselves.

Motion pictures and filmstrips are usually entered under their titles. Special notes cover their physical description (50) Library of Congress printed catalog cards may be obtained for many medical titles (46, 47) The Cooperating Medical Film Agencies, which include the Medical Audio-Visual Institute of the Association of American Medical Colleges, the Committee on Medical Motion Pictures of the American Medical Association, and the Committee on Medical Motion Pictures of the American College of Surgeons, supply the Library of Congress with necessary data on many nongovernment medical films and filmstrips. The United States Office of Education furnishes information on medical films produced by government departments.

Helpful suggestions for cataloging maps, charts, etc., are given by the Library of Congress (48) and by S. W Boggs and D C. Lewis (7) Diplomas and certificates need only a simple method of indicating their presence and extent. They may be arranged in a separate file, first under the name of the institution, then alphabetically under the name of the individual concerned All the items from one institution may be listed on a catalog card with the heading "Diploma file." An added entry under the individual's name lists on one card all such material pertaining to him.

Sound records, whether they be disc records or tape recordings, are likely to be of local interest. In cataloging, emphasis should be placed on entering the item accurately under the name of the individual or group responsible for it. The Library of Congress has devised rules for cataloging this type of material (51) and C. E. Stow gives additional suggestions (40) Exhibit and museum materials are most miscellaneous in character and a small medical library may not have occasion to catalog such items. Brief listing on cards with subject headings descriptive of the type of material, such as Posters, Instruments, Medal collection, should suffice (see Chapter 8)

While it is generally agreed that audio-visual materials may be cataloged on standard cards, there is difference of opinion on whether it is desirable to file these cards in the public card catalog or to maintain separate catalogs for various types of materials. Schools and public libraries favor one catalog for all materials, unless they are housed in widely separated locations. When a single catalog is used, added entries are usually made for each item under headings representing the physical form, for example, Filmstrips, Motion Pictures. Thus a special catalog is provided within the general catalog for each type of non-book material. Special libraries tend to prefer separate indexes. The decision made by the individual library will depend on the size of its book collection, and therefore of its main catalog on the amount of audio-visual material it expects to index and house and on the way in which non-book materials are to be used by the readers.

Arrangement of catalog

Dictionary catalogs

When the catalog of a library in the United States is being described, it is generally spoken of as a dictionary catalog· that is, "a catalog, usually on cards, in which all the entries (author title, subject, series, etc.) and their related references are arranged together in one general alphabet. (3, p. 231) This arrangement proves satisfactory in most small libraries, whether public, college, or special, and may be accepted by all medical libraries, except perhaps, the very largest ones.

As a library grows in size, its card catalog grows in complexity because of the increasing number of corporate entries and subject subdivisions. Simplification may be attempted by dividing the catalog into its component parts. It may be divided vertically that is, into separate units such as an author-title catalog and a subject catalog Or it may be divided horizontally explained as follows by W E. Wright, "a division into separate catalogs

each of which within the field it covers, is a complete dictionary catalog Such divisions we already have in most large libraries, in departmental catalogs, juvenile catalogs, catalogs of books in foreign alphabets, etc. (53, p 55)

Author-subject catalogs

The division of a catalog into an author title section and a subject file has several advantages. The two sections may be located at a distance from each other Thus more consultants may work with the same divisions of the alphabet at the same time, since some will be concerned only with authors, and others with subject entries. Filing of cards, and therefore finding, is simplified by such a division. It becomes possible to determine more easily and much more quickly whether the library has a book by a particular author one with a specific title, or material on a given subject. R. K. Hagedorn feels that a subject file separated from author and title entries would be much more usable for the majority of the patrons, and says, "The uses of the author catalog are obvious. The author file remains the invariable and certain approach of people who know what they want. In universities it is the usual approach of the faculty graduate students, and research workers it is the approach of the undergraduate student who does not read beyond the assigned bibliography A separate author catalog is especially desired by technical and professional users, and bibliographers. As for the librarians, the author approach is used almost exclusively by the order and catalog departments in their checking (23, p 224) It is possible, therefore, that such an author subject catalog would be convenient in any library regardless of the size of its catalog The libraries of the New York Academy of Medicine and the American College of Surgeons have used this type of catalog successfully for many years.

Many libraries have been accustomed to a certain amount of horizontal division of their catalogs. Examples are the separation of the cards for audio-visual materials from those for books and the filing of cards for periodicals in a special section. Wright's discussion of the subject (53) dealt with a horizontal division by date. In a catalog so divided no matter whether the arrangement is dictionary or author-subject, the entries for the last five to ten years are filed in a separate section from earlier ones. The entries could be duplicated in the main catalog so that it would continue to provide the complete statement of the library's resources, or cards could be transferred to the main catalog as they became over age for the current section. In either case, the reader would be greatly benefited, both in time and effort, by having a comparatively small catalog in which to search for recent material.

Classified catalogs

Classified catalogs are based on the classification scheme in use in a particular library. They are not often found except in quite large libraries where users are unable to consult material in the book stacks. Mann describes these catalogs in detail (28, p. 181–82). They have three parts, an author and title section, a subject or classified file, and an alphabetical subject index to the subject file. The author and title section is exactly like any other author-title catalog. The subject file is the classified catalog proper and contains cards for all material in the library arranged according to the classification. In this respect it is similar to the shelf list, but it also includes cards for parts of books which have been analyzed. The alphabetic subject index is needed to furnish the reader with a key to the classification system by which the cards are arranged. An example of a successful classified catalog in a scientific library is that of the John Crerar Library in Chicago.

Shelf lists

The shelf list, made up of cards showing the number of copies or volumes available for each title, and arranged according to classification symbol, is an important record for all departments. According to Mann (28, p. 95–96) it furnishes a key to the call numbers, serves as a check against duplicate call numbers, is an aid to the classifier, may be used as a classified catalog, is an inventory record, serves as a measuring stick for the book collection, gives a historical and statistical record of that collection, is an insurance record, and may be used to furnish subject bibliographies. If the catalog department is located at some distance from the main catalog and shelf list, it may be desirable to provide an official shelf list. This duplicate record saves catalogers and classifiers a great deal of time and effort.

Filing rules

Consistency in filing completed catalog cards is most important. Accurate entries and headings are of little value to the library user unless they can be found easily after having been filed correctly. A basic filing code is the *A. L. A. rules for filing catalog cards* (2). Eaton says:

> This volume is the work of a committee which studied the existing codes and formulated a set of rules which could serve as a basis for filing in the dictionary catalog of any library. Many of the filing problems are covered by more than one rule in order to provide variant rules for libraries of different sizes. A library may

find in the alternative rules a more satisfactory means of filing its cards than is offered in the more commonly accepted rules. The library which uses the A. L. A. code must decide which rules it will follow and indicate in the official copy of the code any alternatives to be used and any additional rules that are adopted (20, p 108)

Other printed codes which were well known prior to publication of the A. L. A. code, and which may be still in use in many libraries, include those from Cincinnati (11) Cleveland (12) and Pittsburgh (31)

Bibliographic aids

The cataloger of medical material, faced with the necessity of establishing correct author entries, personal or corporate, and of supplying other pertinent descriptive data for titles, deserves to be equipped with adequate reference tools for that purpose. The basic codes previously mentioned, for author and title entries, descriptive cataloging, and filing, are guides to form only and must be supplemented by information gained from other sources. These sources may be of various types, such as card catalogs, especially prepared authority files, printed cards from other libraries, union catalogs, and printed bibliographic aids.

The library catalog

Aside from the information regarding an author which may be found on the title page or elsewhere in the book at hand, the cataloger s primary source for identification is the library s own card catalog A previously established entry for the author ends the need for further search. A small library in the neighborhood of a larger one, either medical or general, may readily benefit by checking in its catalog for authors about whom there is some question.

Although the cataloger may be able to depend to a large extent on the library s own catalog and on entries from Library of Congress cards, it may be desirable to prepare an author authority file, or at least a few authority cards. An authority card may be defined as "an official card that gives the form selected for a heading in a catalog. If the heading is for a personal author it has references to sources and a record of variant forms if for a corporate author sources, a brief history and a statement about changes of name." (5 p 9) If there is possibility of confusion with another author of a similar name, the authority card is useful for preserving biographic data which has been compiled, together with notations concerning the sources from which they were obtained. Such cards are particularly helpful when used to record information concerning corporate

names. These authority cards may be filed in the main catalog, in front of the cards for each author or in a special file convenient for the use of library staff members.

Library of Congress card

The entries on Library of Congress printed cards are authoritative and the descriptive information included on them is accurate. Most medical libraries will find that the cataloging of a large proportion of their current book acquisitions will be simplified by using them. Their cost is offset by the amount of staff time saved in the library in verification of entries, preparation of copy typing and proofreading of cards. Instructions for ordering and using Library of Congress cards are given in its *Handbook of card distribution* (45) and the Card Division will furnish information on prices on request. Sets of cards are less expensive when ordered by card number instead of by author and title. There are several sources for obtaining these numbers. Entries in the *Cumulative Book Index* and *Publishers Weekly* include them. The Library of Congress has arranged with numerous publishers to print its card number on the verso of the title pages of their books. The catalogs in book form of the Library of Congress printed cards may be consulted for card numbers, and the Library of Congress proof sheets are also useful for this purpose. These correspond to the cards which are published later and may be used as a guide in cataloging before the Library of Congress cards arrive. It is possible to subscribe to certain subject sections of the proof sheets. That is, a library may buy only those which deal with medicine, chemistry etc. The proof sheets, which are furnished monthly are published in long sheets, but may also be obtained already cut to card size and punched, ready for filing.

Other printed cards

The Armed Forces Medical Library does not distribute its printed cards, but it is possible to enter a subscription with the Card Division of the Library of Congress to receive one copy of each multilithed card which it produces. The subscription is for the entire yearly series—it is not possible to buy selected cards. These cards aid in verifying entries and serve as a guide to cataloging in much the same way as do the proof sheets.

A medical library can make little use of the printed cards supplied by the H. W Wilson Company They are satisfactory as to entry and, usually as to format, but most of the cards are for titles likely to be found in small public and school libraries. Several of the medical publishers, for example, the Blakiston Company and Oxford University Press, issue descriptions of their current publications on cards of the same size as the

standard catalog card. These include information needed in descriptive cataloging, but are not usually in a form which could be incorporated into the card catalog. They include information concerning the content of the book which would interest the reader but the statement regarding the author does not aid the cataloger in establishing an entry. It is no more inclusive than the title page of the book itself.

Union card catalogs are another important type of reference tool for catalogers. Libraries located near enough to any of these catalogs so that they may consult them frequently are fortunate. These union card catalogs, which may be national, regional, or local, are usually main entry catalogs, *having the same purpose as that of the author catalog in an individual* library plus the function of describing each item in a number of libraries and indicating in which collections the item may be found. They are most valuable in establishing proper author entries. By far the largest and most comprehensive of these catalogs is the National Union Catalog at the Library of Congress. It includes over 17,000,000 cards and represents contributions from hundreds of libraries all over the United States besides those from several large libraries abroad. It acts as a clearing house for information on the location of research material for the entire country. Requests may be made of the Union Catalog Division by mail, telephone, or in person.

Library of Congress depository catalogs are to be found in over sixty of the larger libraries throughout the country. These catalogs consist of complete author sets of Library of Congress cards which are forwarded to the selected libraries as they are published. Some of these have become regional catalogs, as they have been made the basis for union card catalogs which serve certain areas. Instances of this are the catalogs at the Bibliographical Center for Research, Rocky Mountain Region, Denver and the Pacific Northwest Bibliographic Center, Seattle. A general catalog which contains a great deal of medical material is the Union Library Catalogue of the Philadelphia Metropolitan Area, Philadelphia. The holdings of many of the medical institutions in Philadelphia are represented in this catalog.

There are a few union catalogs devoted to medical literature. The Union Card Catalog of Medical Literature in Chicago was organized under the general supervision of the Institute of Medicine of Chicago and is housed in the John Crerar Library. It includes cards from the medical division of the John Crerar Library and the medical libraries of the University of Chicago, University of Illinois, Northwestern University and several smaller medical collections in the city. It gives a satisfactory picture of the medical book material available in Chicago. The Union List of Medical Literature at the Boston Medical Library aims to include all the

medical literature found in the more important libraries in the state of Massachusetts. Of a slightly different type is the Union Catalog of Medical Portraits at the Armed Forces Medical Library in Washington. This catalog, organized in 1941 contains approximately 66,000 cards for portraits in the following libraries College of Physicians of Philadelphia, Jefferson Medical College, John Crerar Library New York Academy of Medicine, and Northwestern University Medical School. It also contains cards representing portraits in the Library's own journals and books. It is supplemented by the Armed Forces Medical Library Portrait Catalog which contains approximately 18,000 cards representing the 18,000 portraits in this library's portrait collection.

Printed bibliographic aids

There are numerous printed bibliographic aids which the cataloger may find useful in supplying information about authorship and verification of titles. These may be special types of publications or general reference works which would be available in small collections or in accessible larger ones. A brief listing of important medical and scientific titles follows, descriptions of which will be found in the Bibliography of this *Handbook* Familiar reference works are not listed here, but may be found in Winchell's *Guide to reference books*

- American Dental Association. American dental directory (no. 935)
- American Hospital Association. Administrator's guide issue of *Hospitals* (no. 1111)
- American Medical Association. American medical directory (no. 278)
- American men of science (no. 36)
- American Occupational Therapy Association. Occupational therapy yearbook (no. 1665)
- American Psychiatric Association. Biographical directory of fellows and members (no. 1513)
- American Psychological Association. Directory (no. 1560)
- Biographisches Lexikon der hervorragenden Ärzte aller Zeiten und Völker (no. 220)
- Biographisches Lexikon der hervorragenden Ärzte der letzten 50 Jahre (no. 221)
- Castiglioni, Arturo. A history of medicine (no. 309)
- Directory of international scientific organizations (no. 61)
- Directory of medical specialists (no. 281)
- Garrison, F. H. An introduction to the history of medicine (no. 311)
- Medical directory (no. 257)
- Major, R. H. History of medicine (no. 315)
- National Research Council. Handbook of scientific and technical societies and institutions of the United States and Canada (no. 62)
- National Research Council. Industrial research laboratories in the United States (no. 1132)
- Schmike, Hans. Bibliographie der internationalen medizinischen Kongresse und Verbände (no. 166)
- U. S. Armed Forces Medical Library. Armed Forces Medical Library catalog (no. 102)
- U. S. Army Medical Library. Index-Catalogue (no. 104)
- —— Index-Catalogue Congresses (In no. 104)
- Who's important in medicine (no. 225)
- World list of scientific periodicals published in the years 1900–1950 (no. 25)

Other publications which will be helpful are local directories, such as the *Medical directory of New York State* and *Who's who in Chicago*

Numbers in parentheses preceded by no. refer to items in the Bibliography at the end of this *Handbook*.

and Illinois specialty directories, such as the *Orthodontic directory of the world* biographies and obituaries located through periodical indexes and abstracts such as *Biological Abstracts Chemical Abstracts Current List of Medical Literature Index to Dental Literature in the English Language Quarterly Cumulative Index Medicus* biographies and obituaries found in current periodicals, such as *American Journal of Nursing, British Medical Journal Canadian Medical Association Journal Deutsche medizinische Wochenschrift Journal of the American Dental Association Journal of the American Medical Association* and various state journals, *Journal of the American Pharmaceutical Association (Practical Pharmacy Edition) Lancet* and *Presse médicale* and numerous encyclopedias, dictionaries, and histories.

More complete listings of printed aids are included in the previous edition of this *Handbook* (29) pages 121–25 of which give fairly extensive information sources for authors by country and period. Additional data can also be found in Erna Russo s compilation of current sources, arranged geographically (34)

SUBJECT CATALOGING

In contrast to descriptive cataloging, which is concerned with the identification of items in a library s collection, subject cataloging is concerned with the accessibility of the subject content of those items. Broadly interpreted, this includes both classification and determination of subject headings, but since classification is treated separately in Chapter 6, the discussion in this chapter is limited to subject headings.

Subject entries are as essential in a medical library catalog as author entries, for while many library users have an exact title in mind and need only an author index to the collection, others are searching for material on a particular subject. Subject entries in the card catalog do one or all of three things (1) show where to find material on any specific subject (2) show as nearly as possible in one place everything that is to be had on that subject (3) through cross references indicate mention of the subject in places which would not be apparent immediately For instance, under "Gastro-intestinal tract" the reader may be directed to the types of material which the library has on the subject, such as textbooks, treatises, monographs, pamphlets, or periodicals. By looking through the subheadings he will find all aspects of gastroenterology close together anatomy diseases, physiology or surgery By following the *see also* references he may be led to more specific phases, such as those relating to the stomach, appendix, or colon. Hence the selection and assignment of medical subject headings are important processes which require careful attention.

Subject headings

Several factors which must be considered in determining subject headings are the same in a medical as in a general library. Some of these are (1) the size of the library, (2) the type of material included, (3) the type of service offered, for example, whether book shelves are open or closed to patrons, (4) the kind of reader who is to use the card catalog. The librarian of a small library may feel that, since its collection is limited, numerous subject entries in the catalog are desirable, not only to represent entire books but also to show the content of parts of books. If the collection is small and readers have ready access to the shelves, classification provides much of the subject approach, but subject entries are more important as the collection becomes more complex and they must become more numerous when direct access to the shelves is limited. If the library's clientele is a small group composed of individuals of similar interests, such as research workers in a limited field, subject headings may be selected with less difficulty than in a large library where many different types of readers must be served.

While there are no books of rules for the assignment of subject headings, such as the codes which may be followed in descriptive cataloging, there are general principles which the medical subject cataloger needs to observe. The basic idea to be kept in mind is that there must be continual consideration of the way in which the library user will attempt to locate subject material. Anticipation of his method of approach and the difficulties he is likely to encounter in finding entries which describe his subject interest must precede the application of principles.[1] With the user's needs in mind, select the most specific term which accurately describes the subject treated in the book at hand. The degree of specificity to be aimed for depends to some extent on the type and size of the library. For example, the medical department of a public library may find the general heading "Parasitology" sufficient, whereas a research library will need the more definite "Ticks." It is desirable to use simple, specific names for drugs, diseases, syndromes, and apparatus, for instance, "Barbital and barbital derivatives" instead of "Hypnotics" for a book which deals only with barbital compounds, "Spine—Tuberculosis" with a reference from "Pott's disease" instead of "Spine—Diseases," "Fröhlich's syndrome" instead of "Pituitary body—Diseases," and "Electrocardiography" instead of "Heart—Diseases—Diagnosis." No definite statement can be made as to the number of subject entries to be made for any one book. Some few titles may not

[1] Books which may be consulted for more complete treatment of principles in assigning subject headings include: Cutter (15), Eaton (20), Haykin (26), Mann (28), Sears (35).

need any subject entry many treat only one subject and one heading is all that can be used others need several distinct entries to analyze their contents—for example, Key and Conwell's *Management of fractures dislocations and sprains* needs headings for "Fractures," "Dislocations," and "Joints—Wounds and injuries. The number of entries may depend, too, on the amount of material available in the library on a given subject. Entries for parts of books are more likely to be necessary in small collections. Care must always be taken not to overload the catalog with unnecessary subject entries which, in time, make it unduly cumbersome and hard to consult.

The size and type of library have a great deal to do with the policy carried out in assigning subject headings. In medical libraries which are attached to or form part of general collections the subject cataloger must be governed by the rules laid down for the assigning of headings to all fields of knowledge. A new form or heading which may be especially helpful in dealing with medical books cannot be adopted unless it conforms to the general scheme. New headings can be added and changes made only with extreme difficulty because of the complicated, lengthy process of deciding on an authority and then dealing with the many cards in various catalogs which must be changed. Such adherence to the terminology of general authority lists is not necessary for a medical library which is a unit in itself Terms in step with the advances of medicine may more readily be added and changes may be made more easily

Selection of terms

The terms selected for subject headings should be those which will be understood by the regular users of the library In a general library this would mean the adoption of common rather than technical terms, but in a medical library the procedure would be reversed. Even here, though, the familiar term is to be used, such as "Whooping cough" instead of "Pertussis," and "Gall-stones" instead of Cholelithiasis" or "Calculi, Biliary" Medical libraries in this country should adopt headings which represent current American usage and which should be English rather than foreign terms, for instance, "Abderhalden's reaction" rather than Abwehrfermente." Care must be taken to choose a convenient term for a heading, one which groups the most closely related material by means of a main heading with subdivisions. It is inadvisable to use adjective headings such as "Medical jurisprudence," "Medical education," and "Medical chemistry" because of the scattering of material on jurisprudence, education, and chemistry which result, with consequent overcrowding of headings under "Medical." However other adjective headings, such as "Mental hygiene"

and "Public health," may well be used, unless, as in the case just mentioned, too many headings become localized in one place. Care must also be taken to avoid the use of synonymous headings. There need not be entries under both "Insomnia and "Sleep—Disorders." One heading, with a reference from the other is sufficient. Likewise, confusion will arise if a group of headings such as the following are used "Digestive organs, "Digestive tract," "Digestive system, and "Gastro-intestinal tract." One heading should be chosen and cross references should be made from the others.

Style of headings

There is considerable variation in the form of subject heading used in different libraries, particularly in punctuation and capitalization. The most generally used forms are

MEDICINE. HISTORY
Medicine—History
Medicine. History
Medicine (History)
Medicine, History
Medicine (History of)

The comma is frequently used for inverted headings such as Injections, Intravenous, but a dash may be used instead "Injections—Intravenous. A comma used before subheadings will often cause confusion, as in Anatomy Human, Charts, diagrams, etc." A dash or period used before the subheading will make the whole heading clearer "Anatomy Human—Charts, diagrams, etc." Sometimes headings ending in prepositions are used "Metabolism—Disorders of, "Pregnancy—Complications of" or "Typhoid—Carriers of The length and awkwardness of this form may be avoided by omitting the preposition "Metabolism—Disorders."

Subject cross references

Subject cross references may be *see* or *see also* references. A *see* reference refers from a term not used as a heading to one which is used. Readers will have various terms in mind for a subject but it is not feasible to include all such terms as subject entries. The cataloger decides on the one to be used and, at the time a subject is adopted, makes the *see* references which are applicable. They should be made in the following instances

From all synonyms and nearly synonymous terms: Hydrophobia, *see* Rabies.
From the second part of a compound heading: Bridgework, *see* Crown and bridgework.

From the second part of an inverted heading Focal infection, *see* Infection, Focal.
From variant spellings Oesophagus, *see* Esophagus.
From opposites when a subject is included under the name of its opposite Vivisection *see* Antivivisection.
From singular to plural, or vice versa Feet, *see* Foot Child, *see* Children.

A *see also* reference refers from a term used as a heading to related terms under which additional material on the original subject may be found. Ordinarily reference is made from a general subject to a more specific one, seldom the reverse, and from a large subject to a smaller one or in both directions when the related subjects are of equal value, as in the following

Optics, *see also* Eye. Vision.
Eye, *see also* Optics Vision.
Vision, *see also* Eye. Optics.

Such references should be made only when they are applicable to the material in hand. A small catalog will not need to include many *see also* references. Heterogeneous references from or to every possible related subject are confusing and of little practical value. *See also* references are helpful when they show particular headings under general forms, for example, "Lungs—Diseases," *see also* "Pneumoconiosis" "Hand" *see also* "Fingers and toes." A few general information references may be desirable when a library has little book material dealing entirely with specific subjects in order to direct those readers who are not well acquainted with medical literature to other sources for their subject material. For example, a card could be made for Anemia" bearing some such statement as "Chapters on this subject will also be found in textbooks on hematology and medicine."

Importance of consistency

From this discussion of principles in assigning subject headings it is evident that consistency is a watchword to be kept in mind constantly Otherwise utter confusion will develop among the subject entries in the catalog and they can no longer be depended upon to serve their original purpose of analyzing the subject content of library materials. This consistency can best be attained if the cataloger has an authority list at hand. One may from time to time forget the form used, whether "Peptic ulcer "Ulcer Peptic," "Gastric ulcer" or "Ulcer Duodenal" and reference to a list is necessary There is no single, complete, printed list of subject head-

ings available for medicine and allied scientific fields,[3] nor would such a list remain satisfactory for any length of time if it were available. Hence each library will find it necessary to compile its own list of the terms which have been adopted for use in its catalog and of the cross references to and from those terms. Lists of headings, both general and special, and other aids for the cataloger to use in establishing a subject authority file are considered later in this chapter

Careful distinction is necessary in certain cases between the heading used for the subject matter itself and that used for a discussion of it as a general division of knowledge. "Eye" and its subdivisions should be used for material on the eye, its anatomy diseases, physiology etc., while "Ophthalmology should be used only for something about the science as a whole. A book on the history of ophthalmology as a specialty would be entered under "Ophthalmology—History while one demonstrating the eye and its diseases would go under "Eye. In case of doubt, or when both phases are discussed at length, both headings should be used. *See also* references connecting "Eye and "Ophthalmology would be essential.

The use of variant subheadings under different main headings should be avoided. For instance, the subdivisions under specific diseases should be the same for all if "Treatment, Surgical" is used as a subhead for Appendicitis, then the same subhead would be used for "Varix"—not "Treatment, Operative or any of the other variant forms.

Chronologic subdivisions under large general headings may make some material more readily available. The same time divisions should be used uniformly such as

Anatomy Before 1501.
Anatomy 1501–1800.
Anatomy 1801–1900.
Anatomy 1901–1930.
Anatomy 1931–1950.
Anatomy 1951–

Exceptions to the established divisions should be made *only* in those headings where the peculiarities of the subject s development make some other division preferable. If it seems necessary to bring the last time division more nearly to date, it may be broken up into five year periods. It should be noted that these time divisions relate to the period of the composition of the material that is, a book by Hippocrates would go under Before 1501 even though published in 1939

[3] Experience with the new *Subject heading authority list* (42a) recently published by the Armed Forces Medical Library may modify modification of this statement.

Form headings

Literary form headings are seldom used in medical libraries except occasionally as subheadings or in connection with nonmedical writings of medical men. For the latter such headings as "Fiction," "Poems," and "Drama," will include almost exclusively the work of doctors. As subheadings they may be used for medical subjects in literature "Syphilis—Poetry" "Yellow fever—Plays." Lists of subject headings usually contain standard subheadings to be used under organs or regions, diseases or pathological conditions, drugs or proprietaries.

Sometimes certain types of material are most useful when collected in particular categories for instance, publications by or about dental societies may be brought together under the heading "Societies, Dental." This can be done for all sorts of institutions, medical schools, hospitals, foundations, etc. If there is much material under these category-forming headings, it may be well to further subdivide under localities, such as country or state, and if necessary city A similar form heading could be adopted for periodicals, or the subject headings used for periodicals may be general, such as "Obstetrics—Periodicals," "Medicine—Periodicals, or "Medicine, Clinical—Periodicals.

In the case of books published in the less well-known languages, such as Arabic, Sanskrit, Armenian, Turkish, Modern Greek, Russian, Hebrew Chinese, and Japanese, it is sometimes necessary to show what books are available in that language, regardless of the subject matter A suitable heading for this type of book could be Sanskrit literature—Medical texts."

Headings for biographies

Individual biographies usually need no subject headings beyond a subject entry under the name of the person written about. This entry may also be made for autobiographies. A similar entry may be made for histories or descriptions of an institution or organization, even though it may be itself the author of the publication. In a catalog where the number of cards under any one name is small there is no difficulty in reading through all of them, but in a large catalog, where the cards for the person or institution as author and subject are many and separated, the additional subject entries are necessary Biographies may be given a further subject entry when the subject matter is of importance beyond its bearing on the biographee. For instance, a life of Roentgen might also receive the heading, "Roentgen rays—History Bibliographies of individuals require an entry including the form subdivision, Bibliography" under the name of the person concerned.

New or changed headings

The subject cataloger is frequently confronted with two problems the introduction of entirely new subject headings and the necessity for changing headings to a more acceptable form. In medicine there are many newly coined terms or newly publicized subjects which need to be represented in the catalog as soon as possible. For example, the entire field of atomic medicine, developed during and immediately after World War II was not covered by any adequate list of subject headings—libraries were forced to manufacture their own headings for temporary use. New subject headings should be considered as tentative until the terms have become established The impermanence of some terms may cause difficulties, for instance, the change in spelling from "Sulphanilamide" to Sulfanilamide," "Vitamine" to "Vitamin, and the changes in the names of the various vitamins. If the headings prove incorrect after a short time, they must be changed.

In adding new headings certain cautions should be observed. The cataloger must be sure that the contemplated heading is not already in the catalog under a different term If it is, a *see* reference to the latter will be sufficient. If the new heading later comes into common use, the old one may be changed and a reference made from it to the new term. It may be desirable to use a new heading which is actually a new subdivision under one already established. In this case, all the entries which belong under it should be weeded out from the main heading and brought together For example, if the heading "Spleen—Diseases—Diagnosis" is started, then all the entries which rightfully belong there, but which had previously appeared under "Spleen—Diseases, should be transferred to the new form. Current periodicals and their indexes may be used as sources for new terms.

Changing of subject headings should be kept at a minimum, for it is a costly procedure, both in time and effort. The necessity for the change should be an urgent one. The only valid reasons for changing a well-established heading are because it is incorrect, inconvenient, obsolete, or ridiculous. Examples of each type are Soriasis" for "Psoriasis," "Handed ness" for "Left and right handedness," "Corpulence" for Obesity" and "Climates, Warm, Diseases of" for "Tropical medicine." If a heading does not fall into one of these classes it is wiser to continue it and to make a reference from the new one.

If a heading becomes entirely outmoded and it does not seem feasible to change a great number of entries its use could be terminated with a definite date and references used to indicate the headings used and their dates

Contagion and contagious diseases
For material issued after 1951 *see*
Communicable diseases

Communicable diseases
For material issued prior to 1951 *see*
Contagion and contagious diseases

It may also be possible to change the headings of the cards without correcting tracings for the subject entries, a laborious and time-consuming task. A note on the card for the new subject in the authority file might be sufficient, as for example under Communicable diseases" "Subject heading changed in catalog, 1951 Tracings not changed from Contagion and contagious diseases. "

Subject authority lists

In order to attain that consistency in the selection and use of subject headings which is of paramount importance, an authoritative list of headings which have been adopted by the library must be available. Though no entirely satisfactory printed list of headings exists for medical subject fields, there are a number of general and special lists and aids which may be used as guides and adapted to the needs of the individual library Descriptions of the most important of these follow Further information on some of them as well as on additional titles are given by Janet Doe (16)

Subject heading lists

American Dental Association. Index to dental literature subject headings, 1949 Chicago: American Dental Assn., 1949 p.365–430. (no. 928)

This list consists of "Dental Index Headings, reprinted from the *Index to dental literature in the English language 1945–1947* and "Dental Index Headings, Additions and Changes in 1948 and 1949 from the *Index 1948–1949* It is kept up to date by "Subject Heading Revisions" listed in each succeeding annual volume of the *Index* These headings could be used as basis for subject entries for separate dental collection but library containing much non-dental material would find this list insufficient and would have to provide headings from other sources. Caution would then need to be exercised to see that these dental headings were consistent in form with others which might be adopted.

American Hospital Association. The magic key to hospital literature, guide to the use of the library Chicago: American Hospital Assn., 1950. 48p. (no. 1099)

The list of "Subject Headings for the Vertical File may be used as a guide in selecting headings dealing with all phases of hospital organization and administration. These are too detailed for most book collections and few libraries would wish to concentrate so many entries under "Hospitals with the multiplicity of subdivisions that are used here. These suggested entries could readily be adapted to the form used by any library having much material in this special field.

Bowler, Inez. An elementary manual of dental library practice. Ann Arbor: University of Michigan Pr 1932. 181p.

Appendix III, "Subject Headings, shows basic terms which may be used for dental books. These terms are correct but, because of the date of its publication, the list is no longer adequate. It must be supplemented by the American Dental Asso-

dation a *Index to dental literature subject headings* and by the addition of new terminology from other sources.

Greene, A. G., ed., Subject headings used in the catalogs of the U. S. Atomic Energy Commission. Oak Ridge, Tenn. Technical Information Service, 1951. (var. pag.) (U.S.A.E.C. (TID-5001))

This list was compiled in answer to the numerous requests which were made to the Atomic Energy Commission for the headings which were used in indexing the reports issued by the Manhattan District of the U. S. Corps of Engineers, the Atomic Energy Commission, and their contractors. The body of the list contains the headings used for this purpose together with the *see* and *see also* references which have been adopted. All headings are in direct form, no inverted headings are used. Appendices include the standard subheadings in use, a table of elements, isotope synonyms, and classification of radiation-detection instruments.

National League for Nursing. Curriculum Committee. A library handbook for schools of nursing. New York The League, 1953. 265p.

Part II, "List of Subject Headings, Bellevue School of Nursing, provides valuable basic list of terms for nursing school libraries and is useful in any library having nursing as well as medical books. It must be supplemented by new headings from other sources.

Quarterly Cumulative Index Medicus. Subject headings and cross references 2. ed. Chicago American Medical Assn., 1940 431p. (no. 99)

This list was prepared primarily for the use of the indexing staff [illegible] t the American Medical Association headquarters to aid in indexing periodical and pamphlet material. I [illegible] general library it is mainly useful in suggesting satisfactory medical terms to use in connection with general lists, such as that of the Library of Congress. I [illegible] medical library it may well be used as basic list with corrections and additions interpolated. The headings [illegible] re for the most part reasonable and consistent, cross references are adequate, and [illegible] list of standard subheadings is supplied. Though the list is now out of print, many medical libraries are fortunate enough to hav [illegible] copies. Those who do not may make use of headings found in individual [illegible] olumes of the *Quarterly Cumulative Index Medicus* This is not as satisfactory as using the "Subject Headings" list since no one volume of the *Index* contains all of the headings which may be used. In any case, current volumes of the *Index* must be consulted for up-to-date headings, and references must be made to other types of lists for headings which are not strictly medical in character. Since the headings in this list are designed to index periodical articles they should not be followed blindly for books. Some are inverted titles which should be avoided in [illegible] catalog, and some are too minutely subdivided to be applicable to book titles. As a basic list, however this is indispensable.

Sears, M. E. Sears List of subject headings. 6. ed. by B. M. Frick. New York Wilson, 1950 558p.

Earlier editions included the words "for small libraries" in the title; according to the preface, this list "follows the Library of Congress form of headings, abridged and simplified to meet the needs of smaller libraries. It is well-compiled list of headings for all subject fields and may be used satisfactorily in [illegible] sizable general library The headings for medicine and allied scientific fields are not adequate for [illegible] medical library as they are not sufficiently specific or numerous. Headings for general material are suitable, and the introductory chapter "Practical Suggestions for the Beginner in Subject Heading Work, is [illegible] fine presentation of the principles governing the assignment of headings.

Special Libraries Association, Chemistry Section. A list of subject headings for chemistry libraries. New York: Special Libraries Assn., 1945 53p.

This is [illegible] basic guide with headings in the form followed by the Library of Congress. Reference to *Chemical Abstracts* would be necessary to provide new terminology

U S. Armed Forces Medical Library Armed Forces Medical Library catalog, 1950 + Washington: Library of Congress, 1951 + (no. 102)

Prior to 1950 this catalog contained only author entries for items cataloged at the Armed Forces Medical Library The 1950 [illegible] olume has [illegible] subject index, and beginning with 1951 Part Tw [illegible] is [illegible] subject catalog. These catalogs do not provide complete subject headings lists, for no one of the volumes need include all of the subject headings in use [illegible] t the Armed Forces Medical Library Only the subject entries cor [illegible] esponding to the author entries for mate rial cataloged during the year are given.

Pertinent cross references are included. The Armed Forces Medical Library is gradually stabilizing its subject heading policies and has just published its list of headings (42a). That list should be a major contribution in the field; it may prove to be the base upon which most medical libraries will be able to build their subject headings. Meanwhile the *Catalog* may be consulted as a guide to the form and subdivision of headings and to suggested cross references. As the annual catalog appears fairly promptly, it is an authoritative source for new headings.

U. S. Social Security Board. Library. Selected list of subject headings. Washington, 1940. 335 numb. l. Supplemental subject headings, to be used with the list of headings issued in December 1940. Washington, 1951–54 numb. l.

Not every medical library will need subject headings for books and pamphlets on social work and public welfare, but those who do will find these lists helpful. They supersede, to a large degree, a similar list, entitled *Social welfare: a list of subject headings in social work and public welfare* issued by the Social Science Group of the Special Libraries Association in 1937.

U. S. Library of Congress. Subject Cataloging Division. Subject headings used in the dictionary catalogs of the Library of Congress. 5. ed. Washington 1948. 1,204p. (With cumulative supplements, 1947/48+)

This is actually the subject authority list for a single library but it is also the most comprehensive list of general subject headings available. It includes headings for medicine and allied scientific fields, but these are generally broad in scope. They may not be worked out in sufficient detail for a small special library; however many of the headings can be used, with adaptations as necessary from other sources for specialized medical terminology and for up-to-date terms. The list may be used as an authority for form and style of headings, and for nonmedical and borderline material. Explanations of terms used and the cross references which are suggested are valuable. The Library of Congress is necessarily cautious in changing the terms it has used because of the volume of work involved in any such action, but it is currently introducing new terms. These are reported in the monthly cumulative supplements. The Library of Congress printed cards indicate headings which have been selected from this list. These should not be used without first checking the library's own subject authority list to see whether they conform to headings already in use. Those libraries having access to the Library of Congress subject catalogs (43–44) which provide a subject record of works currently received and cataloged by that library may find them an additional aid in selecting general headings.

Voigt, M. J. Subject headings in physics. Chicago: American Library Assn., 1944. 151p.

The usefulness of this specialized list is increased by the inclusion of definitions and explanation of many terms, and by adequate cross references.

Subject heading aids

In addition to the printed lists of headings there are numerous types of publications which the subject cataloger may consult for authoritative information on terms. Indexes, abstracts, and periodicals are especially valuable in determining headings for newly introduced subjects. The following list contains some of these aids and Doe (16) describes others. Dictionaries, terminologies, encyclopedias, textbooks, monographs, or periodicals may also be used as aids in selecting subject headings. Care must be taken in adopting headings from such sources to prevent using inconsistent forms or terms not generally accepted in scientific literature.

Biological Abstracts. 1 1926+ (no. 768)
Chemical Abstracts. 1, 1907+ (no. 837)
Current List of Medical Literature, v 1 1941+ (no. 103)

A helpful explanation of the subject heading policy of this periodical will be found in 24 no. 2, August, 1953, p.3–6.

Excerpta Medica. 1947+ 16 sections. (no. 90)

Howard, M. E., ed. Modern drug encyclopedia and therapeutic index. 5. ed. New York: Drug Publications, 1952. 1431p. (no. 1446)

This volume contains descriptions of newly introduced drugs (pharmaceuticals) biologicals, and allergens. It is kept up to date by *Modern Drug* quarterly supplement.

Index to dental literature in the English language, 1839/75+ (no. 928)

Nuclear Science Abstracts. v 1 1948+ (no. 715)

Psychological Abstracts. 1 1927+ (no. 1556)

Quarterly Cumulative Index Medicus. v 1 1927+ (no. 99)

Standard nomenclature of diseases and operations. 4. ed. New York Blakiston, 1952. 1,034p. (no. 917)

In this volume the National Conference on Medical Nomenclature, under the auspices of the American Medical Association, gives authoritative American terms in the "operations index" and the disease index.

U S. Army Medical Library Index Catalogue Ser 1–4, v 1 10. Washington Govt. Print. Off 1880–1948. (no. 104)

Though it is undeniably an indispensable tool in cataloging, there are several reasons why the headings in the *Index Catalogue* cannot be considered by libraries as an authoritative list of subject entries. The headings change from series to series —sometimes within the series—hence there is no consistency of form. The terminology is not clear and frequently leans to foreign rather than English usage, too many synonymous headings are used, too few cross references are included, and there is no standardization of subheadings. However because it is a complete catalog of large medical library it is useful in that it shows clearly just what sort of material should be found under each heading, and great numbers of new words appear in it which would be difficult to find elsewhere.

Unlisted Drugs. v 1 1949+ (no. 1449)

Information on new foreign drugs, American experimental drugs, and new American trade-marked preparations is included.

World Health Organization. Manual of the international statistical classification of diseases, injuries and causes of death. 6. rev of the International lists of diseases and causes of death. Geneva, 1948–49. 2v (no. 918)

Compilation of subject authority list

Although it is improbable that a medical sciences library will be able to use any one of the available printed lists as a single guide for its subject headings, it would be well to follow one rather comprehensive list as a basis for form and style of heading The type of material in the collection and the interests of the library's users are determining factors in the choice of such a list. For a collection including much nonmedical material and serving a varied clientele the comprehensive Library of Congress *Subject headings* and the *Quarterly Cumulative Index Medicus* list would both be basic tools. An average or small medical library would find the headings from the *Index* list sufficient as a starting point. All libraries should be able to rely on the Armed Forces Medical Library list when it becomes available. Other specialized collections, such as a dental library need the special lists for much of their material. In any case, the printed lists are never to be considered final authorities. They are always subject to change, as established subject headings must be corrected and new ones must be added.

The subject authority list, or file, may be compiled in several ways. If a single printed list is adopted as a basic one, it is possible to check in that

list all of the headings and references which the library has used. *Sears List of subject headings* is printed with a wide margin on the left hand side of the page and the right half of the page blank. There is ample room for checking in the margin those headings which have been used and for inserting in approximately the proper alphabetic place on the right hand side any new headings and references to be added. The *Quarterly Cumulative Index Medicus* list or the Library of Congress *Subject headings* may be checked in the same manner This method may be satisfactory for a small library However since most libraries have to rely on several sources for entries, a list on cards becomes almost inevitable. It is the only way to preserve clarity in this record and at the same time provide for its expansion. There should be a separate card for each subject and each subdivision of a subject. Anvor Barstad says, "The subject authority card should preferably indicate the source and the definition of the term chosen, the classification number most commonly used and complete tracing of cross references as they are worked out. Geographic subdivisions, form subdivisions and other subdivisions should be definitely decided on for each heading and indicated clearly in the subject authority list." (6, p. 148) It is desirable to include the date when the decision regarding the heading was made. It is well to remember that the preparation of an authority card is but a first step. The references from synonymous terms and the see also references must be checked against the list to make certain that the headings from which and to which they are to be made are actually in the catalog If an established heading is canceled or altered not only must the authority card be canceled or revised accordingly but new see references must be substituted for the old ones and the heading canceled or altered in all the see also references traced on the authority card." (26, p 94) The maintenance of a subject authority file may seem to be a time-consuming process, but it will be well worth the effort in providing an accurate, consistent record of headings and references by means of which present-day and future catalogers will be able to supply readers with subject entries which actually serve as a key to the contents of the library

In any medical library emphasis needs to be placed on subject cataloging as one of the most valuable and important processes in the preparation of materials for the use of readers. This is affirmed by A. O Hanson

> Subject heading [illegible] nlly recogni[illegible] being the most difficult part of cataloging as well as p[illegible] most impo[illegible] y in a special library Most special librarian[illegible] clientele [illegible] in these specialized materials and conscious[illegible] y [illegible] the art of differentiation.

The more intimately these individuals work with the contents of the library the more critical or appreciative they will grow of the librarian's skill in making the contents of books and the sources of information available. This job should obviously be undertaken only by one trained in cataloging, with a background of knowledge and experience in the use of the subject matter involved. It is important to know the rules and the reasons for them in order to break them intelligently as one sometimes needs to do, or to adapt them to our own needs (24 p. 321)

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chapter 8

Non-book materials

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IN THIS CHAPTER of the *Handbook* miscellanea of various and sundry sorts are considered. The small things of life are frequently the most troublesome it is the mosquito that annoys, not the mountain. In the administration of any library it is the minor detail that irks this *may* be done, or that *may* be done, but which *should* be done? In order to make the answer easier the pros and cons of many methods are considered here and the advantages and disadvantages enumerated in the hope that the proper solution may be reached.

Pamphlets, including reprints

With the publication of Lester Condit s comprehensive treatise, *A Pamphlet about pamphlets* (1) it might have been hoped that the last word had been written on this much belabored theme that work is recommended for additional study but for the purpose of this *Handbook* a more concise evaluation of methods is necessary

"When is a pamphlet not a pamphlet? This conundrum meets with the prevailing answer "When it is bound It is generally agreed that if a pamphlet is ultimately bound, it does become a book and is treated as one. We are confronted, however with Newman F McGirr s further question (3) "Does the pot make the broth, or the cover the book?" For the purposes of this discussion a pamphlet is a paper-covered publication of not more than one hundred pages. An alternative definition is that any publication of one-half inch thickness or less may be treated as a pamphlet. Two types of material appear in pamphlet form original material (that which appears in print for the first time) and reprinted material. What is important for the care and preservation of original material is not necessarily vital for reprints. If the original is already in the library it is doubtful, usually that reprints warrant the expenditure of the time necessary to

process and serve them and the space they would occupy Situations arise, however where it is desirable to have more than one copy of an article the reprint will then justify its presence. This is particularly true of new information likely to be in demand and of material needed for classes. It is well however to evaluate carefully both time and space, and question whether both could not be used to better advantage for additional primary material. There is nothing worthless about reprints per se, and, *if the library is without the material in other form the reprints themselves imme diately become primary material for that library*

What is to be kept depends largely on the library s reason for main taining any pamphlet collection at all. A pamphlet collection may be use ful (1) as a means for enlarging the resources of the library at a cost less than that of so many additional books (2) for supplying information ante dating that which may be found in books (3) as containing items of permanent significance that may eventually acquire historical value and (4) as containing material of local interest. Both expense and space must be considered before determining the desirability of adding any item to a collection but space is the primary consideration in estimating the im portance of keeping it there. Cost (which includes the expense of process ing) is of greater significance to the small library houseroom is a crying need of the large and rapidly growing organization. The probable useful ness of the pamphlet must be determined before adding it quality counts far more than quantity Members of the staff of the organization are usually willing to help the librarian make this decision.

Sources

Pamphlets and reprints are issued by the thousands each year and the librarian must constantly watch for such announcements in medical period icals. Abstract journals will prove useful for tracing articles of which re prints are in demand. Lists of government publications often contain items of interest to the medical librarian. The *Monthly Catalog of United States Government Publications* is issued by the Superintendent of Doc uments in Washington. Her Majesty s Stationery Office, London issues a monthly list, *Government Publications* which includes medical titles. Many state health departments issue pamphlets, and the majority are listed in the *Monthly Checklist of State Publications* published by the Library of Congress and for sale by the Superintendent of Documents. The Office of Technical Services of the Department of Commerce issues a *Bibliography of Technical Reports* which may be obtained from that office. Many volun tary organizations, of which the following is a selected list, also publish pamphlets

American Cancer Society Inc., 47 Beaver St., New York 4 N Y
American Dental Association, 222 East Superior St., Chicago 11 Ill.
American Diabetes Association, Inc., 11 West 42nd St., New York 18, N Y
American Dietetic Association, 620 North Michigan Ave., Chicago 11 Ill.
American Hearing Society 817 14th St. N W Washington 5 D C.
American Heart Association, Inc., 1775 Broadway New York 19 N Y
American Home Economics Association, 700 Victor Bldg Washington 1 D C.
American Medical Association, 535 North Dearborn St., Chicago 10, Ill.
American Public Health Association, 1790 Broadway New York 19 N Y
American Public Welfare Association, 1313 East 60th St., Chicago 37 Ill.
American Social Hygiene Association, Inc., 1790 Broadway New York 19 N Y
Commonwealth Fund, Inc., 1 East 75th St., New York 21, N Y
Family Service Association of America, Inc., 192 Lexington Ave., New York 16, N Y
Iowa Child Welfare Research Station, State University of Iowa, Iowa City Ia.
Maternity Center Association, Inc., 654 Madison Ave., New York 21, N Y
National Association of the Deaf, Inc., 713 North Madison St., Rome, N Y
National Committee on Alcohol Hygiene, Inc., 2030 Park Ave., Baltimore 17 Md.
National Committee on Alcoholism, Inc., Suite 454 2 East 103rd St., New York 29 N Y
National Committee for Mental Hygiene, Inc., 1790 Broadway New York 19 N Y
National Epilepsy League, Inc., 130 North Wells St., Chicago 6, Ill.
National Foundation for Infantile Paralysis, Inc., 120 Broadway New York 5 N.Y
National Health Council, 1790 Broadway New York 19 N Y
National Mental Health Foundation, Inc., 1520 Race St., Philadelphia 2, Pa.
National Organization for Public Health Nursing, Inc., 2 Park Ave, New York 16, N Y
National Rehabilitation Association, Inc., 1025 Vermont Ave. N W Washington 5 D C.
National Research Council, 2101 Constitution Ave., Washington 25 D.C.
National Safety Council, Inc., 425 North Michigan Ave., Chicago 11 Ill.
National Society for Crippled Children and Adults, Inc., 11 South La Salle St., Chicago 3, Ill.
National Society for the Prevention of Blindness, Inc., 1790 Broadway New York 19 N Y
National Tuberculosis Association, 1790 Broadway New York 19 N Y
Public Affairs Committee, Inc., 22 East 38th St., New York 16, N Y

Many commercial organizations, too numerous for listing here, distribute excellent material, much of which is free.

If one's own organization publishes similar material pamphlets may frequently be obtained by exchange. Enough space should be left on the

request card for the addition of a personal note in cases where the author is known to the librarian and pleasant greetings or congratulations are in order A card of acknowledgment on receipt of requested material costs little and means much. The importance of stamping date of receipt and source on all such material should be stressed, for it all too frequently happens that this is the only date on the pamphlet and may serve to reveal the approximate time of its publication.

Care

The regulation pamphlet binder is usually sufficient protection for the ordinary pamphlet. These are manufactured by dealers such as Demco Library Supplies, Madison, Wisconsin Gaylord Brothers, Syracuse, New York and Remington Rand, 315 Fourth Avenue, New York 10, New York. Homemade binders are a trifle less expensive if the time for their creation is not charged to cost. Clara L. Sterling (4) has outlined directions for making one that has been found useful in the Western State College of Michigan at Kalamazoo. A method of strengthening the pamphlet before inserting it in the binder has been suggested by Sarah H. Swegert (5) This is done by pasting a narrow strip of muslin down the back and sewing through the pamphlet. If the paper covers are removed from the pamphlet before it is inserted and are pasted on the outside of the binder they will add a touch of distinction and prove an aid to quick identification.

Less expensive than the binder is the manila envelope, which is the next best protection. It is not as durable as the binder and, being much quicker to show dirt and finger marks, needs more frequent renewal. Much depends on the use to which the pamphlet is to be put. If it is to be shelved with the books and circulated the binder is greatly to be preferred. It will stand better on the shelves and will cost no more than several quickly worn-out envelopes. When pamphlets are used for reference only many libraries bind several on one subject into a single volume. This method has disadvantages when the pamphlets are circulated, for it removes several items from the library when only one may be required by the borrower and in case of loss the penalty is severe. The latter hazard is partially minimized by the fact that a volume is less likely to be mislaid than is a single pamphlet. A simple way for keeping several reprints together in one binder is furnished by the U-File M strip. This is a narrow piece of linen with gummed tabs staggered so that a number of items can be held in place when the strip is glued to the inside back of the covering binder These strips cost about one cent each and can be obtained from the U File M Binder Manufacturing Company Syracuse, New York, or from stationers. Costing slightly more, but serving the same purpose, is

the duplex binder that comes equipped with gummed strips to fasten from two to six reprints into one cover

Some libraries file pamphlets in Hobart steel drawer cabinet units which can be housed between stack supports left empty of stack shelves. They can be stacked one on the other and four units house about 1,300 pamphlets. Almost no aisle space is lost in this way as the cabinets project only four inches beyond the space normally occupied by the bookshelves. These 27-drawer units cost about $35 and are available from Hobart Cabinet Company Troy Ohio.

If the pamphlets are to remain uncovered, pamphlet boxes have some advantages. They afford protection, keep many pamphlets on the same subject together and stand nicely on the shelves. They are either hinged for opening at the top or front or are entirely open at the back. The latter form is cheaper in initial cost, but admits more dust. There is also the Princeton file, manufactured by Remington Rand, which is more like a brace than a box. It is made of metal and on the shelf looks not unlike a pair of book supports held together by a strip across the front. Princeton files are available in two sizes 5¾ inches high by 3¼ inches wide by 7 inches deep, at 65 to 80 cents each, depending on the quantity ordered and 8 inches high by 4½ inches wide by 8 inches deep at from 70 to 85 cents each. The Princeton file holds pamphlets satisfactorily but in no sense offers the protection of a box.

Cataloging and classification

The ways in which pamphlets and reprints are made available to library patrons depend largely on the purposes they are to serve. Their usefulness will be greatly enhanced if they are made known to the readers through the catalog. Though it may sound extreme to say that no pamphlet is worth keeping that is not worth cataloging this is the theory on which most libraries act. The completeness of cataloging varies according to the resources of the individual library Justin Winsor (6) of Harvard maintained "There is no treatment of them [pamphlets] worth considering that has not in view their ultimate rank as books, grouped or single. Nevertheless, many libraries make their pamphlets function adequately without such extensive cataloging as would be given to books. In some cases cataloging stops with one card for each subject reading "Library has also pamphlet and reprint material on this subject" and giving its location in the library Midway between the extremes of full cataloging and one card for all pamphlets on a subject is the entry of several pamphlets on one subject card, like a series card. Any one of these three methods assumes some classification, however loose. If the item is to be placed on the shelf

with books of its class, it must necessarily be given the same class number If it is to be kept in a vertical file, in a pamphlet box, or in a pile in some secret closet, a class number or subject heading helps to locate it and later to restore it to its proper place, whether or not it is cataloged. For uncataloged reprints, subject headings marked on each are sufficient. The subject headings should follow some standard guide, such as the *Index Catalogue* the *Quarterly Cumulative Index Medicus* or the library's own subject authority list.

Where to store pamphlets is a debatable question, whether they are cataloged or uncataloged, checked or unchecked. In general, they are best placed on the shelves with the books in their respective classes housed in boxes, they may be shelved either at the beginning or end of their classified section. A list pasted to the inside cover of the box, noting its contents, will not only assist the reader but will indicate the proper place for the return of the pamphlets. Some libraries classify and file them individually with the books, uncovered, but this often results in damage or loss.

The vertical steel file appears to be ideal for storage when neither expense nor space need be considered. It provides ample protection without the necessity of covering each individual item, thereby saving both time and material. It has been calculated that the four-drawer cabinet requires more floor space than stacks accommodating an equal bulk of material. With five-drawer cabinets the difference is considerably lessened. A complete five-drawer cabinet with base and top costs approximately $80, but this amount may be greatly reduced by utilizing so-called transfer cases stacked one upon another to form units. These cases are made of steel with the same finish as the regular filing cabinet and cost approximately $9 per drawer Transfer cases of heavy corrugated paper cost about $3

In the vertical file different arrangements of the pamphlets have been suggested chronologic, numerical, or alphabetic by author or subject. The chronologic file and the numerical are not identical. With the chronologic arrangement the items are filed by date of publication with the numerical they are filed by number as added to the collection. The numerical arrangement may prove to be chronologic in spots, but publication date is not heeded nor can it be followed if discarded items are replaced by new reprints given the same numbers as the discarded ones. The supreme value of the numerical arrangement is that it is the only one of the four that eliminates the necessity of extra space for growth all along the line, thus maintaining a solid file expanding only at its latter end Furthermore, it eliminates the eternal process of shifting The numerical file, of course, demands cataloging with the number of the pamphlet on the catalog

cards and a record book with brief entry in order to identify any item that may be lost. As it is easier to read "1 2, 3," than a, b c," the numerical arrangement is less likely to involve misfiling. The chronologic file, in other than exceptional cases, is not very satisfactory for the reader is usually hazy as to date and, unless the items are cataloged, any particular pamphlet is difficult to locate.

Some libraries shelve in pamphlet boxes, without cataloging, reprints from periodicals they possess, placing them with the journals from which they are reprinted. They are then ready to be used instead of the whole volume, if the required article chances to be among the reprints. On the same principle, they may be placed in a vertical file alphabetically under the names of the journals from which they are reprinted. Ruth S. Leonard (2) of the School of Library Science of Simmons College, has written a well illustrated article on pamphlets and other ephemeral materials, their selection, organization, and housing She has even given detailed instructions on the organization of each folder in the file.

Circulation

The use of a reprint for circulation, instead of the bound volume in which the material originally appeared, has advantages to both the library and the borrower The American Medical Association and the American College of Surgeons circulate a vast number of reprints through their package library services. Many other libraries render similar service to a lesser extent while medical schools find it helpful to have extra reprints of articles required for study

Some sort of protection should be accorded unbound material before it is circulated. If a single reprint is loaned, it may easily be slipped into a spring binder for the occasion and slipped out again before filing when returned. It is less expensive, when several reprints are loaned at one time, to clip each one to a manila folder or if this adds too much bulk, to use one folder for the lot. In the latter case an itemized list of contents should be clipped to the outside of the folder for checking by the borrower to insure the return of all reprints. A duplicate of this list should be retained by the library for the same purpose. Another method is to have a vertical file charge card form printed with spaces for subject or number author title, and date. These may be printed on colored stock and filed together at the charging desk under Vertical File Charges. A supply of such forms kept at the circulation desk can be quickly filled out and assures completeness and uniformity of records. This will suffice for uncataloged material and costs less in time, labor and material than to provide each item with a card pocket and card.

Weeding

Age is one test to apply in weeding a vertical pamphlet file. As soon as pamphlets have ceased to be timely they should be removed from the file unless they are of historical value. In making the decision as to historical value, it is wise to obtain help from members of the organization's staff who specialize in the subject under consideration, since they are the people most likely to use this material.

The best method of weeding a vertical file pamphlet collection is to make a project of it, beginning with the first vertical file drawer and continuing until each item in the entire collection has been considered for present or future value. This is a time-consuming job but since there is no deadline it may be done gradually The number of times a pamphlet has circulated should not determine whether it is discarded. Such material is often used for research in the library only and circulation records do not usually reveal this use. It is possible to limit the contents of some folders by a notation on the folder such as "Keep latest report only" or in the case of some government releases, "Keep two-year file." As new material is added, the old is automatically discarded.

When the weeding has been completed some of the drawers will have extra space and others may not have changed. At this point the file must be rearranged to provide a more equal division of the available space. To do this, measure the present amount of material in each drawer and then total these figures. Next divide that total by the number of drawers available, to get an average for each drawer In shifting, start from both ends and work toward the middle, i.e., A to M and Z to N It is advisable to put slightly less than the average amount in the bottom or top drawers and a little more in the center drawers of each vertical row of trays. This will allow room for shifting in each row in case one drawer becomes especially crowded In arranging the contents, try to avoid dividing a subject between two trays if this is necessary divide so that the part of the subject in each tray is readily ascertainable. It is helpful to make a chart of the vertical file giving the present picture of the bulk and also the new one, similar to the accompanying illustration. The drawers must then be relabeled. On the labels give either the first and last subject in each drawer or the first and last letters, to indicate the contents of the drawer

Picture files

The most convincing argument for a picture file is a description of its functions for both readers and staff One of the primary uses is in exhibits. This is a period in which visual education is receiving great

Chart for rearrangement of a vertical file

17″ 15″ Acth — Cytost	17″ 12″	17″ 25″	17″ 14″
21″ 26″ Deaf — Diseases—F	21″ 17″	21″ 20″	21″ 21″
21″ 20″ Diseases—G — Fluorine	21″ 23″	21″ 18″	21″ 20″
21″ 24″ Gases	21″ 28″	21″ 12″	21″ 25″

The first step in rearranging a vertical file is to measure the material in each drawer. As shown by totaling the figures at the right of each drawer in the chart, 320 inches of material are to be accommodated in the 16 drawers, an average of 20 inches in each. After shifting the material as explained in the accompanying text each drawer will contain approximately the amount shown in the figures at the left. Labels for the first four drawers are also shown.

emphasis. Medical societies, especially, are giving attention to exhibits both for the profession and the laity. Pictorial material in the form of prints, portraits, and technical illustrations of all kinds is the usual starting point. The library staff may draw on the collection in preparing displays for anniversaries and for demonstrating subjects of current interest. Further, the pictures become a source of illustrations for books and articles, furnishing suggestions as well as the illustrations themselves. Similarly, they supply excellent illustrative material for lectures, and for classroom work the collection is vital. One teacher of biology has stated that a good picture shown at just the right time and in the right connection means more than many spoken or printed sentences. Altogether, pictures of all sorts can be made a valuable adjunct to any library's resources.

Many a medical library has a good beginning for a picture file in an excellent collection of portraits in a portrait file. Far from being a dull and routine task, the building of a picture collection should be the special

interest of the most experienced members of the staff who know their subject and who have a keen interest in its present and its past. Most picture collections have their beginnings in the appreciation, by such staff members, of some old print in a book or periodical going into the discard This salvaging instinct can be turned to good account if a few minutes can be spared to clip classify and file such items in a vertical file. A collection begun in this spirit has a pleasant, painless way of growing and eventually saves many hours of searching

Sources

As mentioned before, the picture file is usually the result of a salvaging process. Books and periodicals which are worn out and marked for discard may yield interesting and valuable illustrations. Advertising matter such as circulars, publishers' announcements, etc., often has excellent graphic material. Certain drug firms issue series of pictures or illustrated periodicals which they send to libraries on request. Once it is known to readers that a library is building up such a picture collection, gifts will come in. The assistance of volunteers interested in such a project will often procure many valuable additions. Photostats or photographs of pictures not in the library's collection may be added, with information as to where the original is obtainable.

A list of picture agencies, including commercial firms, museums, and publishers of encyclopedias, will be found in Norma O Ireland's *The Picture File in School College and Public Libraries* (10) These publishers deal in pictures on all subjects and may be able to furnish some pictures of medical interest. Dealers in secondhand medical books sometimes have pictures for sale. Among these are Argosy Book Stores, 114 East 59th Street, New York 22 Goodspeed's, 18 Beacon Street, Boston 18 and Old Hickory Bookshop 31 East 10th Street, New York 3

Care

One of the most practical ways of housing a picture collection for the small medical library is a vertical file. The standard legal-size file is usually large enough to take care of most collections. Pictures may also be placed in boxes on shelves, although this method will probably take more shelf room than most medical libraries can spare. It is possible to have special boxes built by a local carpenter Scale drawings for such equipment will be found accompanying the discussion by Marcelle Frebault (7) in her revision of John Cotton Dana's book. Oversized pictures may be stored in cabinets similar to those used for posters and charts.

The cutting and mounting of pictures require very little expenditure

for equipment. A paper trimmer like those used by photographers is a time saver makes a neat job and adds to the appearance of the clipping Large clipping shears are available at small cost. Razor blades are also useful. The quality of the paper will determine the necessity for immediate mounting Usually it is not necessary to mount the clippings if they are placed in folders and are carefully handled. Exceptions to this are newspaper and other clippings on paper which is subject to rapid deterioration. Some librarians never mount pictures until they are wanted for circulation. A picture can be mounted in a minute or two if the needed materials are kept near the picture file or the charging desk.

Pictures and clippings must be carefully marked. It is best, whenever possible, to leave a margin around the edge or at the bottom of the clipping for marking It is very important that as much information as possible be recorded on the clipping Whenever possible these notes should include title or description of picture source date name of artist or illustrator and subject heading for filing purposes. If there is no space around the picture on which to enter this data, it is best to mount the clipping and put the information on the mount, preferably on the back in case it is used in an exhibit, or to type the information on a slip and paste it on the back of the clipping The entries should not be made on the picture itself. Sometimes a paragraph or two cut from the article accompanying the picture will explain the picture. This may be pasted on the front of the mounting if care is used in placing it so that it does not spoil the appearance of the mounted picture. To avoid error these records should always be made at the time the material is clipped. The assignment of subject headings to pictures is the most difficult part of the process and should be the duty of someone on the staff who is thoroughly familiar with the library's subject headings and who can anticipate the character of the requests for pictures. The more specific the heading is, the more time will be saved in searching Several types of guide cards and folders appropriate for use in a picture file will be found listed in library supply catalogs.

One of the best discussions of the mounting of picture collections is that by John P Givler (9) He points out that, in mounting, consideration should be given to the uses made of the picture collection. Well-mounted pictures can be used with projection lanterns, handed around in the classroom, shown in exhibits, etc. For such use the mount should be stiff enough to prevent warping when put into the lantern or handled by students. When choosing the color of the mount, libraries may benefit by the experience of art galleries and choose a paper or board of neutral tone which will furnish a harmonious background for any picture. If the clipping is

rumpled, it may be dampened slightly on the back and pressed with a lukewarm iron before mounting The sizes of the mounts will vary with the library's needs, but it is best to standardize them as much as possible. Two or three sizes should be sufficient. If all pictures are mounted on these sizes, they will make a more uniform file, be easier to handle, and will give a more pleasing effect when exhibited.

Givler also discusses adhesives which can be recommended for use in mounting, and quotes a letter from the United States National Bureau of Standards which states that any paste made by a reliable manufacturer ought to hold pictures to cards indefinitely Most libraries have already selected a paste which they have found satisfactory Rubber cement is often recommended for this purpose, but its use is limited not only by the quality of paper used for mounting but also by the fact that rubber is subject to oxidation when in contact with air and, although anti-oxidants are added, it may lose its adhesive properties long before a good paste will show signs of deterioration. However rubber cement has much to recommend it for use in mounting pictures for exhibit, for it contains no water and does not cause the paper to swell and buckle. If the cement spreads out beyond the edges of the picture, it can be rubbed off when dry and leaves no mark. Another advantage of rubber cement is that, if it is applied to one surface only the clipping can be removed from the mount. Another technique which gives excellent results is the use of a dry mounting tissue, coated with a compound of organic materials which melt when heat is applied. The tissue is cut to the picture size, or slightly larger and placed between the picture and the mount. The face of the picture is protected by a piece of plain brown paper and a warm flatiron is run evenly over the whole surface. This produces a smooth, even result. All pictures, after mounting, should be pressed by some method for about 24 hours for best results.

A. B. Gibson (8) of the New York Public Library has discussed basic plans for small picture collections. Although the discussion applies to a public library collection, the section which treats of the problems of housing, mounting, and noting of sources is of practical help to anyone starting a picture collection. Ireland's book (10) gives much helpful information on cutting, mounting filing, storage and circulation.

There are several methods of indexing in the mounted file the pictures in books or periodicals which cannot be clipped for this file. One of the methods is simple and has proved satisfactory in a small picture collection. A form about the size of the average picture in the file is prepared and mimeographed. Spaces are left to be filled in with subject heading, title

or description of picture, source, date, name of artist, and call number of book or periodical. The completed forms are filed under subject in the clipping file just as though they were the pictures themselves. Another method of indexing is to make a special card catalog Cards are entered for all pictures in the institution whether they are in the clipping file, in books and periodicals, or are original paintings, etchings, engravings, etc., hanging on the walls. The catalog of the collection of pictures in the Bettmann Archive, 211A East 57th Street, New York 22, furnishes an example of what can be done by this means. Here each picture has an index card on which is pasted a miniature print, enabling the user of the catalog to select the pictures required without handling the pictures themselves. In addition to the card under the main subject of the picture, analytics are made for pictures which contain details of special interest. They may be analyzed according to time, social background, costumes, instruments, or other items of interest within the picture. This method, of course, costs more in time and money than less complete cataloging, but renders a more complete service.

The portrait catalog of the New York Academy of Medicine shows what can be accomplished in the cataloging of portraits alone. Portraits are noted on special cards with red tops which indicate the subject heading "Portraits," without typing it on each card. The name of the subject, his dates, and the title of the book or periodical in which the portrait was found are given on these cards. Special symbols are also used to indicate an accompanying obituary notice or biographic sketch, information which has proved to be as valuable as the pictorial data. This cataloging has led naturally to the acquisition of separate portraits, and a vertical file houses this collection. Since paintings, engravings, etchings, etc. are included in the collection, special attention has been given in the catalog to the technique and to the artist. The Armed Forces Medical Library and the library of the College of Physicians of Philadelphia have similar collections, as do other medical, pharmaceutical, and technical libraries. A valuable aid in searching for portraits is the *A L A portrait index* edited by W C. Lane and N. E. Browne (11) an index to portraits contained in both books and periodicals through the year 1904.

Maps charts and posters

During World War II medical librarians realized how great is the need for specialized forms of maps showing trends of epidemics, influence of climate on health, areas where flora or fauna may be detrimental to man, and a number of other conditions that affect health.

Sources

Few medical librarians know what a debt of gratitude they owe to the catalogers at the library of the American Geographical Society Not content with making known their hordes of maps per se, they are constantly adding to their catalog analytics of sections of books and articles in journals containing maps as illustrations. Among their cataloged items are many pertaining to the geographic incidence of various diseases, the effect on health of weather and climate in special areas, animals and plants as transmitters of disease, epidemiology in relation to air travel, and numerous other topics of importance to medicine. All additions to the catalog, including these analytics, are published by the Society in a monthly bulletin (14) In addition the library answers written or verbal inquiries on these subjects.

Of particular importance to the medical librarian is the Society's *Atlas of Diseases* (12) in course of publication. This atlas is announced as a continuing project the purpose of which is mapping the world distribution of some 25 diseases. Each plate is in color and forms a unit complete with text and bibliography The medical information shown on these maps is based on all available published and unpublished data and includes the geographic distribution of the disease, significant epidemiologic factors, and a summary of the important epidemiologic problems. As of May 1955 the following plates have been published Plate 1 *World distribution of poliomyelitis 1900–1950* shows the timing of the various waves of epidemics of poliomyelitis in the last 50 years and the number of cases and deaths in peak years of prevalence. Plate 2, *Distribution of cholera 1816–1950* traces the routes of the major cholera pandemics of the nineteenth century and shows in detail the outbreaks and permanence of cholera in Asia in the last 25 years. Plate 3, *World distribution of malaria vectors* gives a résumé of natural history species of anopheles extensively distributed species of anopheles locally distributed over Southern Europe, the Near East, and Africa species of anopheles locally distributed over Southern Asia and Indonesia distribution of malaria parasites and a discussion of the epidemiology of malaria. Plate 4 *World distribution of helminthiases* shows worms acquired through lack of protection of body from contact with excreta-established infestation worms acquired by ingestion worms correlated with consumption of certain foods worms transmitted by bite of an insect worms acquired by skin penetration etc. Plate 5 *World distribution of dengue and yellow fever 1930–1951* also shows recorded occurrences of yellow fever 1600–1930 contemporary areas of occurrence of dengue and yellow fever distribution of yellow fever immunity and dis-

tribution of dengue and yellow fever vectors. Plate 6, *World distribution of plague 1900–1952* shows the prevalence of human cases and of wild-rodent infections the towns affected dates of prevalence and length of plague season. Plate 7 *World distribution of leprosy 1952* shows the prevalence—light, medium, or heavy—of leprosy foci of infection and the location of leprosaria. Plate 8, *Study in human starvation* (1) *Sources of selected foods* shows the areas of population sources of animal proteins sources of carbohydrates food supplies per capita per day for most countries and the per centage of total area in arable land and pasture land. Plate 9 *Study in human starvation* (2) *Diets and deficiency diseases* shows the prevalence of selected nutritional deficiency diseases, of diets adequate or lacking in certain values, of vitamin deficiencies, and the diets of selected primitive tribes. Plate 10, *Distribution of rickettsial diseases* (1) *Louse-borne and flea-borne typhus* shows the approximate number of cases of such typhus in selected countries in times of stress (during wars) and in times of non-stress. Plate 11 *Distribution of rickettsial diseases* (2) *Tick-borne and mite borne forms* includes Boutonneuse fever Q fever mite-borne and tick borne typhus, and discusses points of resemblance and of difference among these fevers. Plate 12, *Distribution of rickettsial diseases* (3) *Tick and mite vectors* shows known area of occurrence of vectors and gives description of the natural history of the vectors concerned *Hemiptera* and *Acarina*. Plate 13, *Explored areas of arthropod-borne viral infections (yellow fever and dengue excepted)* shows the known occurrence of arthropod-borne viral infections in animals and man, and describes the ecology of these infections. Plate 14 *World distribution of leishmaniases* covers American leishmaniasis, oriental sore, and kala azar showing the lightly and heavily affected areas, together with the climatic conditions. Plate 15 *World distribution of spirochetal diseases* (1) *Yaws pinta bejel* shows heavy and light distribution, climatic and soil conditions, and illustrations of lesions, and gives observations on transmission and other factors concerned in the epidemiology It is expected that there will be 29 plates in all, the remaining ones appearing at the rate of four a year

Another important collection of medical maps in course of publication is the *World Atlas of epidemic diseases* edited by Ernst Rodenwaldt and others (no. 1623) Sponsored by the United States Navy Bureau of Medicine and Surgery it is concerned with diseases in areas of military importance. The material was prepared by German epidemiologists during World War II under H. Zeiss, director of the Institute of Hygiene of the University of Berlin. The text is in English and German. The two large volumes are to be kept up to date by supplementary sheets.

In addition to securing the maps described, medical librarians should

note in their library's catalog all maps relating to their special field which appear in books or journal articles.

Cataloging and classification

Samuel W Boggs and Dorothy C. Lewis (13) quote Sir Herbert George Fordham, "A map lies in character between a book and a picture, and combines the features of both." They also point out the differences between books and maps, a few of which are quoted as examples to guide the cataloger

"Maps have no very tangible part of their make-up which corresponds to the *title page* of a book. The [analogous] information (i.e., title, imprint, edition, dates, etc.) is often found scattered in different parts of the map or on both sides of the map sheet, and may not even be all in the same language. Thus there is not such an automatic standard by which one can decide what information belongs in the title paragraph, and there is therefore need for detailed rules for selection of material to include on the catalog cards.

"The *content* or subject matter of a map is more frequently of a general character than in books, and even when specific (as geologic data) it is superseded in importance by the geographic area which it covers.

Date is usually more essential in the identification of a map than of a book, since a map ordinarily pictures a situation as it is or was at a particular time hence, a map often becomes out of date more quickly

"The *author* of a map is, more precisely speaking, a compiler cartographer or editor Frequently the name of the author does not appear on the map, and may not be ascertainable. The actual author is frequently in the employ of the publishing concern, which for reasons of its own withholds the individual's name, and assumes, as a corporation, full responsibility for the form and content of the map

"The *publisher* of a map is sometimes not as definitely indicated as in the case of a book, and sometimes it is futile to attempt to designate any of the firms concerned as the map publisher especially in some of the instances where maps are included in books.

"Maps, more than books, are usable in unfamiliar languages."

Boggs and Lewis give a detailed classification scheme and cataloging rules for maps. However very few medical libraries have a large enough collection of maps to need such a scheme instead, a subject heading "Maps" can be subdivided by geographic areas or by other characteristics, such as "Maps, Medical." Some may find it a more practical procedure to put the maps showing diseases, etc. directly into a vertical file under the subject of the map, thus filing it with other material on the subject.

Care

The preceding discussion has been concerned almost entirely with the cataloging and classification of maps. The following discussion of mounting, filing, storage, and repair applies to the care of posters and charts as well as to maps. All these points and many more are thoroughly covered by Clara LeGear (15) who begins with precautions to be observed in unwrapping and unfolding maps and similar materials which are received through the mail in tubes, packages, or boxes. The section on mounting and reconditioning of maps gives detailed information on how to decide what should be mounted and on the various methods of mounting. Equipment and mounting materials are discussed under each specific material—Japanese tissue, cellulose acetate sheeting, parafilm, thermium cloth, and others. Types of map-filing equipment, including horizontal filing cases, vertical files, boxes, portfolios, and cabinets, are covered in another section. The care of atlases and globes is also discussed.

Horizontal filing cases, either wood or steel, are in general use for this oversize type of material. They furnish good protection and accessibility. Standard five-drawer sectional map cases are manufactured by a number of firms, among them the Hamilton Manufacturing Company, Two Rivers, Wisconsin; Art Metal Construction Company, Jamestown, New York; All-Steel Equipment Company, Inc., Aurora, Illinois; Globe-Wernicke Company, Cincinnati, Ohio; Remington Rand, Inc., New York; Columbia Steel Equipment Company, Philadelphia; Lyon Metal Products Company, Aurora, Illinois. Legal size vertical files are adequate for small maps or larger ones which have been folded. Some libraries store maps and posters in specially built boxes, resembling pamphlet boxes, of the same dimensions as the drawers in the horizontal steel cabinets. Where neither the steel cabinets nor the specially built boxes come within the budget of the library, maps may be filed in a portfolio made from two hinged pieces of binder board. Instructions for making such portfolios, as well as map packets and boxes, are contained in LeGear's pamphlet.

Several methods have been devised for the storage of very large maps, posters, and charts. One, in use in the Map Department at Columbia University Library, consists of a row of shallow closets about 12 or 14 inches wide and of equal depth. A revolving wooden disk is fastened to the under side of the roof of the closet. In the under side of the disk, an inch or so from its rim, are inserted large hooks. The oversize maps, each on its own roller, are covered and tied, and each with screw eye attached to its end is hung on a separate hook in the bottom of the disk. The disk can be revolved to locate any particular map. Using this same principle, the maps

may be hung from the underside of the roof of any closet, and the revolving disk, although convenient is not necessary for a small collection. This hanging method is used only for caring for the oversized maps, posters or charts which are made of sturdy material and attached to a roller Still another method of handling such oversize material is to space a series of wooden pegs evenly along a wall in a storage area. The maps or charts, covered, tied, and marked as suggested above, may be filed on these pegs.

Librarians who have a special interest in this subject may be interested in a course, Maps and Cartobibliographical Aids, which has recently been added to the curriculum of the University of Illinois Library School. It is intended as a general information course on map history map resources, map bibliography and map care. A special section is devoted to the technical processing of maps. This course is open to geographers, librarians, political scientists, and others interested in the subject.

Exhibits

Every library no matter how small, has material which can be dramatized. Imaginative, attention-getting exhibits can be arranged at little cost. A bulletin board is a modest beginning Place the bulletin board on a wall near a table on which books and other material can be displayed. The bulletin board may then carry the theme and call attention to the exhibit on the table

Bulletin boards

A very attractive and efficient bulletin board can be made by stretching colored burlap over thick cardboard or other suitable material and mounting it in a simple wood framework such as is sold to artists to stretch canvas on. Burlap is available in many attractive colors and makes an interesting background for pictures and lettering. The cover may be changed at very little cost and, when neatly done, gives the appearance of a professional job. A large sheet of cork also makes an inexpensive and decorative bulletin board. Plain wall paper in pretty colors could be used as a cover for the board, but this, of course, would need to be changed more frequently

Sheets of colored paper smaller in size than the bulletin board, may be mounted on it with colored tacks as a background for pictures and lettering This gives a three-dimensional effect. The sheets should make a pleasing color combination. Colored string—red blue, yellow green, and combinations of colors—can be used effectively to draw attention to the relation of several items on the bulletin board A knot is tied in one end of the string and a tack run through it into the board. The string is then stretched tight across to the item to which attention is being called This

serves the same purpose as drawing lines with colored ink but takes much less time and is more effective.

A simple and effective framework for the display of books, journals, pamphlets, or pictures is the peg-board. Through a variety of attachments easily installed by pegs, many different shapes and sizes of material can be shown and even a shelf of books accommodated The displayer and fixtures are obtainable for about $40 from Gaylord Brothers, Syracuse, New York.

Many librarians hesitate to arrange exhibits and bulletin boards because hand lettering takes so much time, and, unless done by an experienced person, gives the whole exhibit a home-made look. This problem is easily solved by using the good looking cutout letters which are now on the market. Some of the most effective of these are the three dimensional ones of white plastic, with built in pins for easy mounting and removal which may be ordered individually or in special library fonts from Mittens-Display Letters Manufacturing and Sales Company 2 West 46th Street, New York. Attractive, legible cardboard letters are available in many styles, colors and materials. "Redicut" letters are obtainable from the Becker Sign Supply Company 319–321 N Paca Street, Baltimore, Maryland. "Hallcraft display letters may be ordered from Joseph Mayer Company 5 Union Square, New York. If local stationers do not stock the letters desired, these companies and others have catalogs which will aid in selection. For a more extended discussion of the possible contents of exhibits and their value in public relations, Chapter 10 should be consulted, while information on their use in connection with historical collections will be found in Chapter 12.

If the library is lucky enough to have a few empty shelves in suitable space along a wall, an open box effect can be achieved by removing one or two of the shelves. This is a very good space to use for display purposes. This idea was recently described by Ruth Beattie Johnson (22) Florence Pettit (23) has written an excellent article on improving and coordinating signs, displays and bulletin boards. She gives many practical suggestions on inexpensive and attractive bulletin boards, display cases and outdoor display cases and describes ways of achieving a professional touch by using available materials. The *Wilson Library Bulletin* regularly publishes a section called "Display of the Month" which offers good ideas in display techniques for libraries. The library of the Medical College of Alabama has been successful in arranging exhibits and in utilizing space in halls for this purpose. Elizabeth W Cooper (20) has described these exhibits, which have proved very popular

In arranging exhibits it is well to enlist the interest of an artist in one's own organization or community Unusual and interesting exhibits result

ing from this combination of talent have been reported. Of course, if there is a medical artist on the staff of one's organization, the task may be easier

Display cases

If there is a museum in the community a consultation with the director or other members of the staff may be helpful in planning display cases for permanent exhibits. The small museum, like the small library usually operates on a limited budget. Many small museums achieve wonderful effects by using imagination, inexpensive materials, and the local carpenter Building blocks, cork, the new plastics (including Plexiglass), and other comparatively inexpensive materials have been used successfully in arranging display cases. Bases for displaying objects of various sorts may be obtained inexpensively at the local carpenter shop cabinet maker or lumber yard. Odd-shaped blocks of wood which are waste products of these work shops may be just what is needed A wedge-shaped block of wood or several blocks of different shapes may make an interesting arrangement. They can be painted in any color or covered with colored burlap, velvet or other material. Use of these blocks makes a pleasant variation from the custom of having everything lie flat in the case with all exhibits on one level.

The family album

Another type of exhibit which will give a great deal of pleasure and will arouse much interest in the community may be called for purposes of description the "Family Album," and is especially useful for local medical history It can include portraits of physicians and nurses, pictures of hospitals, medical schools and other institutions, new photographs of local medical interest, old prints showing local scenes, old doctors bills, programs, invitations, etc. The wing-panel display equipment manufactured by the Multiplex Display Fixture Company 110 East 42nd Street, New York is an excellent device for displaying this type of material. The company has branches in many of the large cities. These display frames consist of large glass-covered wings which are fastened vertically to a bar and form the pages of the album. Pictures and other display material may be mounted on the mat under the glass. This equipment comes in many sizes a catalog containing pictures and diagrams is available. The wing display method is also useful for exhibiting maps, posters, charts and graphs. Such a display with the intimate touch of the family album, will bring many contributions from members of the community who have old photographs, prints, etc., in their possession. Exhibits in the pages of the album may be changed from time to time to illustrate a special period, commemorate an anniversary or for other exhibits.

Medals

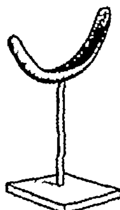
The simplest method for housing medals is to place them flat in drawers. Whether one needs a whole cabinet of shallow drawers, or only one drawer in a desk that can be locked, depends on the number of medals the library possesses. The drawers should be lined with felt and partitioned into small squares. If the collection is to be displayed as a whole by merely opening the drawers, the call numbers may be indicated on the partitions and the medals left uncovered. If the drawers are for storage purposes only a covering box or envelope for each medal will serve as further protection.

The cataloging of medals should be kept as simple as possible. Since the individual commemorated is more important to medical libraries than the artist who executed the medal entry can be made under his name with a brief description of the obverse and reverse of the medal

Medal collection	Bernard, Claude. 1813–1878.	
	Ob.	Bust to right. Signed A. Borrel, 1913.
	Rev	Claude Bernard, né à St. Julien (Rhone) 12 juillet 1813, mort à Paris, 10 fevrier 1878. White metal, 8 x 11 cm.

An added entry under the subject "Medal collection" would be sufficient. Aid in identifying and describing medical medals may be found in Josef Brettauer's *Katalog der Sammlung Medicina in nummis* (17) and in Horatio R. Storer's *Medicina in nummis* (24) Storer's medal collection is now in the Boston Medical Library

An exhibition case is very commonly used for medals. It will be found an advantage when displaying them in this way to have their mount slightly tilted rather than flat in the case, so that details can be easily deciphered The showcase is expensive, however and has the further disadvantage of revealing but one side of the medal, while the reverse side may be equally interesting The Metropolitan Museum of Art in New York has adopted a plan for exhibiting coins to show both sides. This method would be equally satisfactory for medals. The equipment called for is not on the market but is made in the Museum workshop. The display case is about four inches wide, is enclosed in glass on three sides and backed with a mirror The length and height are determined by the number of objects to be shown. Across the center from end to end, it is fitted with strips of wood one and a half inches wide, to form narrow shelves, one above another at intervals of about five inches. Into these strips are driven



Medal holder for display purposes (drawn by Jurgen G Raymond, New York Academy of Medicine Library)

long wire supporting-pins, spaced in accordance with the size of the coins. As the accompanying illustration shows, each pin carries on its top a crescent-shaped cup-like rim of soft metal that can be bent to clasp the rim of the coin The front of the coin faces outward while the reverse is reflected from the mirror that forms the back of the case.

Care of museum material

Practical instructions on the care of material in a museum collection are given in various publications. One of the most useful is the *Manual for small museums* by Lawrence Vail Coleman (19) which contains chapters on museum records, numbering and tagging of exhibits, preparation of material for display exhibition cases (including dimensions of different types of cases) labeling, and installation of exhibits.

If the librarian has the responsibility of caring for valuable paintings, George L. Stout (25) gives practical advice in his book on the *Care of pictures* The British Department of Scientific and Industrial Research (21) has issued a pamphlet on *Cleaning and restoration of museum exhibits* which contains instructions for prints and pictures, stone and earthenware silver iron objects, lead, copper and bronze, wood, glass, textiles, and other materials. *Company museums* are described by Lawrence Vail Coleman (18) in a publication of the American Association of Museums. The Metropolitan Museum of Art has issued a publication by Robert P Sugden (26) on *Safeguarding works of art* which gives instructions on storage, packing, transportation and insurance.

Phonograph records

Librarians who must care for an extensive collection of phonograph

records will find detailed instructions on the cataloging and shelving of such a collection in the Music Library Association's *Code for cataloging of phonograph records* (29) The following information is taken largely from this publication.

The rules for the cataloging of phonograph records follow in principle the rules for books. There are, however some special features peculiar to records. If the recording is a musical one, the rules given in the *Code for cataloging music* (28) issued by the Music Library Association will be applicable.

The *Code for cataloging phonograph records* discusses in detail the sources of information and items to be included in the catalog entry One section of this publication which will make the beginner's task much easier consists entirely of sample cards. Other sections are devoted to a discussion of the various types of phonograph records, their filing and shelving

For a small collection the numerical system of filing (by accession number) is considered to be the most practical. This system avoids the necessity of shifting to make room for expansion by maintaining a solid file expanding only at its latter end This method of filing, whether applied to pamphlets or records, throws the entire burden of locating material on the catalog, and entries must be very complete. To insure that the disk is returned to its proper place, both the album or jacket and the record should contain labels giving the call number composer title, accession number and the name of library A practical account of one music library's cataloging plan is given by Helen W Maywhort (27)

Opinion is divided between horizontal and vertical shelving of disks. Horizontal shelving has the advantage of allowing records to remain flat and thus minimizes the danger of warping, but to facilitate handling the pile should not be more than two inches in height. Vertical shelving demands partitions, preferably adjustable, six or seven inches apart. Records filed in this manner should fit closely together to avoid warping

The methods described above are of the simple, home-made variety however special metal filing cabinets, cases and drawers are on the market and can be obtained from a number of equipment manufacturers, such as Remington Rand, New York Art Metal Construction Company Jamestown, New York and Globe Wernicke Company Cincinnati, Ohio.

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chapter 9

Photoduplication

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THE EMPHASIS IN LIBRARIES at the present time is on audio-visual material. Science and technology have made numerous advances in the processes of photoduplication microfilm readers and motion picture projectors have been mechanically improved microcards have passed through the experimental stage television has been brought into the hospital and is being used as an aid to instruction and a government library is experimenting with facsimile reproduction facilities.

How may the medical librarian make use of these tools? He may obtain photostats and microfilms in place of interlibrary loans replace lost, worn-out or out-of-print material with photostats or microfilm and may replace volumes of monographs and journals occupying much-needed space with microfilms and microcards. Photographs interspersed in an exhibit add interest and variety library routines may be shown to new employees by means of motion pictures and educational films may be enjoyed at staff meetings. The librarian of a small library with limited space has much to gain from the use of these improved processes, and all librarians may become disseminators of information for their inquiring clientele.

Photostats

The word "photostat" is a trade name which through usage has become established as a common noun (2) Photostating or photocopying is a photographic process for copying manuscripts, drawings, maps, records, tracings or any printed material upon photosensitized paper The photostat machine produces an exact copy in readable form, of the original material, in contrast to the reverse image obtained in standard photography The copy may be enlarged or reduced in size from the original, and may be

copied again to make a positive (black on white) rather than a negative image. Prints are furnished in matte (dull) or glossy finish. Negative prints are usually supplied unless a positive is specified

Good photostats have distinct advantages. They can be read without special equipment, are easily handled, and are less trying on the eyes than microfilm. They can be retained permanently in the files and additional copies can be made from them as desired Librarians should be warned, however that the making of copies of photostats of copyrighted originals is illegal. Photostatic copies of rare material prove their worth by substituting for the originals and freeing them from handling, thereby preserving them. Furthermore, the purchase of a photostat is often less expensive than the shipping charges involved in borrowing a volume. The cost of photostats is higher than that of microfilm and they are bulkier requiring more shelf space. The advantages should be weighed against these disadvantages, and each case decided on its merits.[1]

Sources

When a library decides to order a photostatic copy of an article, a source for the original must first be found. One key is the *Union list of serials* the inside covers of which carry a list of cooperating libraries. Those furnishing photostats are indicated by a "P" beside their name. A copy of this list can be obtained cheaply by photostating it. Another aid is *Photoduplication services—report of a survey 1951* (1) which lists libraries furnishing photostats and microfilms and gives the charges for them. In addition, many libraries without photostating facilities will supply copies by sending books and periodicals to commercial firms for processing. If the library wishes to make its own photostats, reasonably priced equipment of the portable variety for making photoprints in small quantity is available, such as Contoura (F G Ludwig Associates, Pease Rd., Woodbridge, Conn.) Copyflex (Charles Bruning Co., 100 Reade St., New York 13) Transcopy (Remington Rand, Inc., 315 Fourth Ave., New York 10) Verifax (Eastman Kodak Co., 343 State St., Rochester 4 N Y) No dark room is required and most of this equipment can deal with books as well as with single sheets some make positive prints as well as negatives. While not intended for large scale production they can be used by libraries or individuals who wish to reproduce material for themselves.

The cost of negative photostats varies from 25c for size 8½ by 11 inches to one dollar for one 18 by 24 inches. The Armed Forces Medical

[1] Lucille Jackson (3) recommends that up to ten pages of periodical article should be photostated; longer references should be microfilmed.

Library makes a minimum charge of 50c for 5 pages. Charges are estimated by the page or exposure, an exposure consisting usually of two pages of material. Many libraries make a minimum charge of one dollar but service and mailing charges are as a rule included in the minimum charge. If a positive photostat is desired, its cost must be added to that of the negative, usually doubling the cost. Most libraries will bill charges, payable after receipt of the material government libraries, however require payment with the order

Care

A small collection of photostats creates no problem of care and storage. Photostats of books and manuscripts are treated like the original material, being bound, cataloged and shelved according to their classification. Periodical articles may be treated like pamphlets.

Microfilms

Microfilms are photographic reproductions of printed, written, or illustrative materials in miniature on motion picture film, usually 35mm. wide, but occasionally 16mm. Such films may be full-length 100-foot rolls, portions of such rolls, a few exposures on a strip of film, or possibly only a single exposure. The reproduction is too small to be read with the naked eye. A negative film (white printing on a black ground) will result from the first filming of ordinary printed material. A positive film (black printing on a white ground) may be obtained by copying this negative, at extra cost, of course.

One of the chief advantages of microfilm is its low cost, which is a help to libraries and scholars on limited budgets, and may prove the means of opening large fields of source material whose price would otherwise be prohibitive, if they were at all obtainable. It is also economical of storage space and requires no binding (15) However microfilm has several disadvantages. It is not legible without a reading machine, a considerable item of expense on the library budget it is easily scratched by dust and torn by improper handling continued use in the reader causes buckling and blistering of the film. In some localities controlled temperature and humidity are required if it is to be stored safely For periods of long-continued reading, it is tiring on the eyes. Finally microfilm has special difficulties for the cataloger These include numerous trips to the microfilm reader which in some libraries is in almost constant use and the form of the material demands the attention of a cataloger familiar with its accessioning, classification marking and housing

Sources

Sources for microfilm may be found in the *Union list of serials* the cooperating libraries being indicated by an "M" against their names. Various directories of microfilm sources have appeared the Special Libraries Association's Committee on Microfilming and Documentation published in 1947 a revised edition of its *Directory of microfilm sources* (19) the Bibliographical Center for Research, Denver Colorado, has issued its *Photoduplication services—report of a survey 1951* (1) and J W Edwards, Ann Arbor Michigan, has issued the Philadelphia Bibliographical Center and Union Library Catalogue's *Union list of microfilms to 1951* (14) listing 25,000 films owned by 200 libraries. A source for microfilm of utmost importance to medical librarians is the photoduplication service (11) offered by the Armed Forces Medical Library in Washington. Perhaps the outstanding feature of its service is its policy of loaning microfilm copies of desired originals for ninety days without charge. Only single copies of copyrighted individual articles can be furnished and complete copyrighted issues of periodicals or books cannot be microfilmed. During the fiscal year 1953 (July 1, 1952—June 30 1953) a total of 105,709 orders for all types of photoduplication work was received by the Armed Forces Medical Library representing more than one and a half million pages of negative film. Of these approximately half were furnished as photoprints or photostats, the rest as microfilms.[3] To obtain microfilm loans from the Armed Forces Medical Library requests should be made on application blanks furnished by the Library and should be routed through a library government agency or research institution. Microfilms may be purchased by those desiring to keep them at the rate of fifty cents for each fifty consecutive pages or fraction thereof of a single article photostats at fifty cents for each consecutive five pages or fraction thereof. Payment should accompany the order in the form of cash, check or money order payable to the Treasurer of the United States, or in the form of coupons purchasable from the Armed Forces Medical Library at fifty cents each, or for soft-currency countries, by UNESCO book coupons.

Libraries without microfilming facilities often arrange for business firms to do their copying One such commercial source of films is University Microfilms, Ann Arbor Michigan which produced films of foreign material in World War II days. It has introduced the idea of furnishing at the end of the year or on completion of a volume, microfilms of a selected list of current American periodicals, provided the library subscribing to the films also subscribes to the periodical (16) The microfilm copy is sub-

[3] See also *AFML News* July 1952.

stituted for the paper issues, which may be used until worn out or discarded immediately The cost of the microfilms is approximately the cost of the binding of the volumes. The company will also copy material sent to it.

Costs of microfilms vary from one cent to five cents per page or per exposure, an exposure consisting of two pages of material measuring less than 30 by 45 centimeters. Large or quantity orders may sometimes be secured at a lower price by special arrangement with the library furnishing the microfilms, but most libraries stipulate a minimum charge of one dollar and a minimum charge of ten cents for mailing Some libraries make a charge for the handling of each volume, and for the film spools and cartons in which the films are mailed.

Storage

Microfilm is now made only on cellulose acetate, or safety film, which is slow-burning and chemically stable. In the past cellulose nitrate, which is inflammable, was also used. Nitrate film, however requires special care (20) and should not normally be stored. Libraries possessing nitrate films are urged to copy them onto safety film and destroy the nitrate.

The Eastman Kodak Company (8) issued a pamphlet in 1951 stating that, generally microfilm records require no greater care than paper records. The kind of care necessary depends on the length of storage periods and atmospheric conditions. Short-term and moderate-term storage requires little special treatment archival storage necessitates an air conditioned storage space with temperature between 60 and 80 degrees Fahrenheit and relative humidity between 40 and 50 per cent. High relative humidity or storage in a damp place may cause damage to the film by the formation of mold too dry an atmosphere causes the film to become brittle and crack or break. The pamphlet recommends that films be inspected at intervals, and that storage conditions be changed if the condition of the films indicates the necessity

For shelving, microfilms may be divided into two classes those of book length, and shorter strips consisting usually of periodical articles. Films of one hundred feet or more are wound on reels and stored in cabinets or boxes with a film symbol or number indicating their location. Various methods have been advocated for the shelving of strip film. R. H. Carruthers and W E. Wright (5) describe a method for splicing together several strips and winding them on one reel with the sequence of the articles listed on the outside of the container L. R. Dice (7) cuts the film into strips of five or six exposures and inserts them in envelopes with paper partitions between each strip. Data can be placed on the front of the envelope and

the envelopes can be filed in a vertical file, pamphlet box, or on the shelf. H. P Brown and J A. Austin (4) store film strips in a 10 by 12 inch filing drawer using cardboard cards of the same dimensions with four layers of cloth stitched on one side of the card, making pockets for films. Each pocket holds one foot of film strip or sixteen pages. Film information is typed on gummed paper and attached to the cloth. E. T Evans and R. M. Goepp Jr., (9) employed a similar method using a manila folder lined with paper pockets for the film strips An ingenious method of caring for very short film strips, suggested by Fremont Rider (18, p. 108-09) is to cement the films to the back of a catalog card, the card to be filed in the catalog drawer A variation of that method is to cut a window in a catalog card and cement two pieces of cellophane, one larger than the other to the card Before closing the one end the film strip should be inserted. Each item of film may also be kept in a separate roll in one of three ways (1) in a small metal or cardboard container filed in a cabinet drawer (2) loose in a cabinet drawer with a string or rubber band around each roll (3) in a cabinet drawer fitted with pegs, each film strip rolled around a separate peg, as described by E. B. Power (17)

A commercial product for storing large quantities of microfilm records is the Filmsort jacket, available from Filmsort Inc., 50 South Pearl Street, Pearl River New York. The jackets are made of clear cellulose acetate or paper with one or more longitudinal channels into which the film is inserted They are made up in sizes 3 by 5 inches, 4 by 6 inches, 3¼ by 7⅜ inches, and 5 by 8 inches, for 16mm., 35mm., and 70mm. film. Forty cellulose or twenty-five paper jackets occupy one inch of space. Another product of this company is the Filmsort aperture card, a file card with an aperture in which film is mounted These are supplied in two sizes 3 by 5 inches and 5 by 8 inches. The claims made for Filmsort jackets and aperture cards are that they are compact, accessible and complete. For reading the Filmsort jackets a portable microfilm viewer the Inspector and a large viewer the Surveyor are available. Films need not be removed from the jackets. Practical use of Filmsort jackets was demonstrated by W J Wilson (21) Chief of the History of Medicine Division, Armed Forces Medical Library on a buying trip to Europe. His portable catalog consisted of 234 plastic Filmsort jackets, 5 by 8 inches, which held positive microfilm copies of 28,080 catalog cards representing 26,025 books. Another product similar to Filmsort is offered by Remington Rand's Management Controls Division. It is called Kard A Film and consists of cards with slots into which microfilms are slipped for filing The cards are available in sizes ranging from 2 by 3¼ inches to 11 by 14 inches. A Kard A Film reader is necessary to read the cards. Unmounted filmstrips can be read

in a microfilm reading machine if mounted against a white background (as when cemented to a catalog card) they may be read in a microcard reader For information on the cataloging of microfilms, see Chaper 7

Inspection cleaning and repair

The Eastman Kodak Company (8, p. 10–11) recommends that care be exercised in the handling of film to prevent tearing and scratching Scratching is caused by dirt or by the improper use of equipment. Dirt and fingerprints may be removed from film by gentle cleaning with carbon tetrachloride, which should be used only in a well-ventilated room because of its poisonous fumes. Archival film records should be inspected after each use or if unused, every two or three years any damage to the film whether short-term or archival records, should be repaired immediately The equipment for repairing films consists of a rewind apparatus, splicer notcher film cement, and cement applicator A clean work space is essential. Directions for making repairs are supplied with each splicer and each film cement bottle dealers in photographic materials will also give information. Care must be used in repairing microfilm lest one of the frames of film be lost in trimming the damaged part.

Reading machines

A reading machine is necessary for the use of microfilm. Prospective buyers of microfilm readers are urged to consult the series of articles by D H. Litchfield and M. A. Bennett (12) for basic and practical information Although the majority of readers discussed in the articles are no longer being manufactured the information given is still useful. The Photo Duplication and Multiple Copying Methods Committee of the American Library Association issued a mimeographed report March 15 1951 on Microfilm Reading Machines which stated, "The choice of a microfilm reading machine depends on how many machines your library has and what type of material they are intended for If there is to be but one machine in the library it should be an all purpose one, capable of handling everything from book to newspaper microfilm." The Conference on Micro-Reproduction held at Ann Arbor in January 1951, under the auspices of University Microfilms, listed the requirements for a good reading machine as sharpness of image, uniformity of illumination protection against injury of film either from heat or scratches, simplicity of operation, portability possibility of damage of film through faulty operation kept to a minimum, variation of reduction ratios, and reduction of eyestrain. The types of readers needed by libraries were also discussed "There are two types needed those required for library use, which should be substantial,

of biochemistry biology botany chemistry medicine, physiology psychology and zoology Titles of cards available in these fields are listed, with prices, in the *Microcard Bulletin* Microcards may be ordered either from the Microcard Foundation or directly from the publisher of the particular title desired they vary in price but average about 25¢ per card. To compare the cost of volumes in the original and on microcards one may observe the prices for a few selected titles. The *Annual Review of Biochemistry* volumes 1–19, 1932–50, was recently quoted in a dealer's catalog for $165 or $8.68 per volume. Microcards are available for volumes 1–5 and 8–11 1932–42, at the cost of $22.50 for 83 microcards, averaging $2.50 per microcard volume The *Journal of Biological Chemistry* volumes 1–45, 1905–21 460 microcards, may be purchased at $174.80 $3.88 per microcard volume. Quotations on the original volumes were obtainable from two sources, volumes 40–110, 1919–35 $850 or $12.14 per volume, and volumes 137–193, 1941–51 $950.00 or $16.66 per volume, showing a considerable difference between the original and the microcard costs. *Physiological Reviews* volumes 1–11 1921–31 139 microcards, may be purchased for $37.50, $3.40 per microcard volume. Quotations for the originals, volumes 4–32, 1924–52, averaged from $15 to $20 per volume. *The anatomy of the rat* (1935) by E. C. Green, long out of print, which retailed originally for $5, may be purchased on microcards for $2.25 *A history of epidemics in Britain* (1891–94) Charles Creighton, published in two volumes and now quoted at $35 is available on cards at $12.50. Not only is there a saving in the cost of the volumes but in the space occupied by them as well. Forty-five volumes of the *Journal of Biological Chemistry* take up five feet of shelf space, while their 460 microcards occupy five inches of a catalog drawer

Care

It was Rider's original intention (18 p 162) that microcards should be filed in a library's general catalog Experience has shown that this was impractical and it has been found more convenient to file microcards in a special catalog, preferably close to the reading machine. G W Bacon (23) states that in the Wesleyan University Library typed cards or Library of Congress catalog cards for microcard material are filed in the catalog with "Microcard" stamped on each card. The microcards themselves are filed by Library of Congress classification and then by author entry A colored card labeled Card Removed," is substituted for a microcard removed from its place A box placed near the reading machine is the depository for used cards to be refiled by staff members. Pennsylvania State College Library (24) uses a similar system but files its microcards by author only One technical library (25) serving three hundred scientists makes its

own microcards and arranges its collection of over 11,000 microcards numerically by accession number with catalog cards filed by serial number author and subject. Microcards, may also be filed by Dewey Decimal classification or alphabetically by subject and title.

Projectors

The Northern Engraving and Manufacturing Company La Crosse, Wisconsin, manufactures microcard readers. It has added two types, Microcard Reader #6 with Fresnel screen and #6A with coated screen, to those already available. They differ from Models #5 and #5A in that they have a mechanism for holding and moving the microcard. Magnification is 26 times. All models are portable and can be used with either alternating or direct current under ordinary lighting conditions. Coated screens permit viewing from a greater angle and reduce reflections from room lights and windows. The Eastman Kodak Company has designed and constructed a model of a microprint reader which will accommodate microcards or microprint material up to 8½ by 10 inches in size with 22 times magnification. The case is constructed of metal. The glass of the translucent screen is colored a greenish hue to avoid glare and reflections. The card holder a roller similar to the card platen of a typewriter is located in front and below the screen. The card is inserted in the holder and the roller rotated forward or back to read the copy Page adjustment is made by moving the roller to the right or left. The reader weighs less than a standard typewriter and is priced at $300.

In addition to the readers, a "scrutinizer" or scanning device, is available from the Northern Engraving and Manufacturing Company It is a low-power microscope, useful for examining the title pages and contents of microcards but not suitable for continuous reading It is manufactured in five and seven-power magnification, weighs one pound and costs from $16.50 to $32.50.

Motion pictures

Medical, dental, pharmaceutical and nursing schools have found motion pictures an effective teaching aid. Government agencies gave impetus to the use of motion pictures for teaching programs during World War II when the instruction of large groups in a minimum of time was essential. Motion pictures are valuable not only in teaching but also as historical records. Examples are the film portraying Dr Rudolph Matas as he performed his last operation and that showing the late Dr William H. Welch addressing his former students and friends a few months before his death. Most medical libraries do not own large motion picture collections, but

the library may be the repository for departmental or school collections. In any case, it is essential that medical librarians be well informed on medical motion picture films, since inquiries concerning the use of films are often directed to them.

Professional motion picture films are for groups with specialized or technical training. Popular motion pictures, less technical in their presentation, are for lay audiences, such as parent-teacher associations, women's clubs, parent education and study groups, normal school classes, and public service employees. Both professional and popular films may be in black and white or in color, silent or equipped with sound.

Sources

Motion pictures may be secured by purchase, on a rental basis, or on loan, free of charge, from state health departments, government agencies, pharmaceutical companies, and from doctors. Borrowers of free films usually assume the shipping charges. New films are regularly reported and reviewed in the *Journal of the American Medical Association*, the *American Journal of Public Health*, and the *Journal of Medical Education*. Each film is described and evaluated and information on source and cost is given. The American College of Surgeons publishes in the Approval Number of its *Bulletin* (28) a classified list of films available commercially or on loan. No films are sold, loaned or rented by the College and films listed are not reviewed, but listing indicates approval. The March, 1952, issue of the *Bulletin* announced a new service instituted by the Motion Picture Committee of the College, that of publishing news in the *Bulletin* about new motion pictures approved by the Committee immediately upon their release in an effort to bring them to the attention of its readers as soon as possible. Reviews are intended to be informational rather than critical, to enable the prospective user to determine their value for teaching purposes.

The Review Committee of the American Association of Anatomists has published in the *Anatomical Record* (60) a descriptive list of motion pictures approved by it and available at the Wistar Institute. These films may be used at the Institute by scientists and students without charge, rented for $1.50 to $9 per day in the United States, or purchased at prices from $5 to $300. To publicize the availability of new films on anatomy, anthropology, or embryology, the editorial board of *Acta anatomica* in 1953 (volume 19, page 104) announced its intention of publishing free of charge the titles of moving pictures which film producers and research workers are willing to supply. Information about each film should include title, running time, whether in black and white or color, and rental or sale price.

Of particular interest to dental librarians is the article by H. S. Levin (45) librarian of the American Dental Association Film Library She reports the efforts being made to build up the film library of the Association with motion pictures whose subject matter follows that of the curricula of the dental schools. The available films, intended for undergraduate and postgraduate dental students, may be borrowed for $2.50

James Fuller (42) reports that the best single source of information on medical motion pictures is the American Medical Association s Committee on Medical Motion Pictures, founded in 1946. The Committee distributes free of charge mimeographed lists of sources of films on specific subjects and furnishes information for obtaining any existing medical motion picture film. One of its publications, *Sources of medical motion pictures* 1951 (35) lists 66 organizations and individuals from whom motion pictures may be secured, with their addresses and the subjects of their films. A section is devoted to catalogs and evaluated lists of medical motion pictures. No film titles are given inquiries about films available should be directed to the organizations and individuals listed. Another publication of the Committee is its *Reviews of medical motion pictures* (31–34) consisting of reprints of the reviews published in the *Journal of the American Medical Association* each week. Films reviewed are for both professional and non-professional use. *A List of films available through the motion picture library American Medical Association* (30) is issued by the Committee for free distribution. The films listed may be borrowed by scientific groups for two days on a service charge basis. Service charges range from one to eight dollars. Transportation charges are assumed by the borrower

The Medical Audio-Visual Institute of the Association of American Medical Colleges in Chicago is a consultant service which supplies to medical schools information and help in the use of audio-visual aids. Established in 1949 as the Medical Film Institute (38, 50) to serve as a center of study and advancement of audio-visual media in medical education," its aim is "to develop, in collaboration with all interested agencies and individuals, effective patterns for the production and utilization of these media and to provide services to implement this objective." (37) It has no film library and loans no films, but it has issued classified lists of films, with full descriptions, as follows *Reviews of films in medicine and related sciences* 1951 *Reviews of motion pictures on neoplastic diseases* two series, 1951 *Medical teaching motion pictures now in production* 1951 and *Films in psychiatry psychology and mental health* 1953. The first three lists are available without charge to teachers in medical schools and others interested in the subjects. The Institute has rendered medical teachers and librarians a valuable service by extracting from the Library

of Congress publication *List of titles of motion pictures and filmstrips for which Library of Congress cards are available* (56) over 300 titles (41 57) of motion pictures and filmstrips relating to medicine. Information on the producer of the film, year of production, and the Library of Congress card number are given.

In 1951 the H. W Wilson Company published the tenth edition of its *Educational film guide* (59) listing 8,251 16mm. motion picture films. Two supplements were issued in 1952 and one in 1953 Part I is an alphabetic author and subject index. Part II is the classified section and contains information about films on the following subjects related to medicine history of medicine, anatomy nursing, public health and preventive medicine, disease control, pharmacy toxicology dermatology psychiatry aviation medicine, surgery gynecology obstetrics and pediatrics.

The Committee on Motion Pictures in Education of the American Council on Education published *Selected educational motion pictures* (29) in 1942. The volume lists, reviews, and appraises five hundred films designed for nonprofessional use in many fields. Of interest to the medical librarian are films in general science, health, hygiene, and physiology Louise S. Walker (46) Supervisor of Audio-Visual Education in Montgomery County Maryland, has edited an informational pamphlet, *16mm motion pictures for use by P.T.A. and other adult groups* It gives brief summaries, running time, and occasionally prices of the films listed. The New York State Department of Health offers two lists of medical motion picture films (48–49) for loan, one for professional audiences, the other for the laity The most recent revision of the professional list also contains a section devoted to films relating to nursing education. Films are sent without cost to any group for showing for educational purposes in New York State. The borrower pays transportation costs one way

Motion picture films on mental health for discussion by health educators and teachers, students, and professional and lay groups are to be found listed in a pamphlet issued by the National Institute of Mental Health, *Mental health motion pictures a selective guide* 1952 (47) In addition to a synopsis and the usual information on producer date, running-time, distributor and audience intended, data is given on securing permission for television showing. Another publication suggesting films on mental health appropriate for lay groups is *Motion pictures for mental health programs* (43) Two pamphlets *Health films catalog, an annotated list* (40) and *Selected motion pictures and slidefilms for nursing education* (44) assemble annotated groups of films useful in nursing education. *Health films catalog* also contains a list of institutions, colleges, and associations which will rent the films listed.

The Society of American Bacteriologists, Committee on Materials for Visual Instruction in Microbiology has issued a list of 199 motion picture films reviewed under the supervision of the Committee (51) Summaries of the films and distribution information may be purchased for three cents per film copy from Dr Harry E. Morton, University of Pennsylvania School of Medicine, Philadelphia 4 Pennsylvania. Pharmacology is represented by a classified list of films and filmstrips issued in 1947 by the American Society for Pharmacology and Experimental Therapeutics, Committee on Visual Teaching Materials (36) A supplement appeared in 1950 The publication gives descriptive information and sources. A list of British films on anesthesia is included.

The United States Children s Bureau has issued *Sources of information on non-theatrical films relating to child health and welfare* 1948 (53) "a guide to help in locating films suitable for use by professional, civic, and lay groups interested in the well-being of children." The Office of Education has published "A directory of 897 16 mm. Film Libraries," compiled by Seerley Reid (54) It is an alphabetic listing, by state, of institutions or organizations in the United States which loan or rent films on education. The *Library of Congress Catalog—Films* (55) reproduces the cards for motion picture films and filmstrips cataloged by the Library of Congress, arranged by film title with a name and subject index. It appears in three quarterly issues, January March, April-June, and July-September and an annual cumulated volume. The United States Communicable Disease Center Atlanta, Georgia, issues *CDC catalog of motion pictures and film strips for professional and sub-professional groups* (58) an alphabetic and classified list. The list is published in loose leaf form. New material or revisions are issued at intervals. Films on laboratory techniques, parasitology rodent control, insect control, and many other subjects are sent on loan for two weeks or on special loan for a longer period. Return postage must be paid and the films insured. Agencies in foreign countries may borrow films from the Communicable Disease Center for ninety days delivery is made through State Department diplomatic pouch.

The following organizations rent motion picture films

American Dental Association, 222 East Superior Street, Chicago 11, Ill. Professional and popular films. Rentals vary from $2.50 to $3.50 per day; $4.50 to $7.50 per week.

British Information Services, 30 Rockefeller Plaza, New York 20, N Y Rentals and sales. Catalog free.

Indiana University Audio-Visual Center Division of Adult Education and Public Services, Bloomington, Indiana. Catalog free.

International Film Bureau, Inc., 6 North Michigan Avenue, Chicago 3 Ill. Rentals and sales.

State University of Iowa, Bureau of Audio-Visual Instruction, Extension Division, Iowa City Iowa. Catalog free.
National Film Board of Canada, Suite 2307 1270 Avenue of the Americas, New York 20, N Y Rental and sales.
New York University Film Library 26 Washington Place, New York 3, N Y
Princeton Film Center Princeton, N J Some films loaned free.
U S. Armed Forces Institute of Pathology Medical Illustration Service, Washington 12, D C.

Rental charges vary from $1 to $12 per day depending on the type and length of film sale prices range from $25 to approximately $200.

Pharmaceutical, medical and surgical companies loan motion picture films to medical schools, hospitals, and accredited medical and surgical groups. Some of these are Abbott Laboratories, North Chicago, Illinois Davis and Geck, Inc., 57 Willoughby Street, Brooklyn 1 New York Lederle Laboratories, Division Cyanamid Company Film Library 30 Rockefeller Plaza, New York 20 E. R. Squibb and Sons, 745 Fifth Avenue, New York 22 and Winthrop-Stearns, Inc., 1450 Broadway New York 18

Care

Storage of film on safety base creates no special problems, as stated previously in connection with microfilms. In an instructive sheet issued by the Eastman Kodak Company (39) it is recommended that reels of film be placed in cans and stored upright either on shelves or in metal cabinets. These cabinets may be obtained from the General Fireproofing Company 413 Dennick Avenue, Youngstown 1 Ohio Lyon Metal Products, Inc., 1933 Montgomery Street, Aurora, Illinois or the Neumade Products Corporation, 330 West 42nd Street, New York 18 The Eastman instructions stipulate that the cabinets should be located on the main floor of the building, in a temperature of between 70 and 80 degrees Fahrenheit and a relative humidity of between 25 and 60 per cent. No film should be stored in a damp basement, which results in mold growth, or in a hot attic, which causes the film to become dry and brittle and to curl, with possible damage in projection. Humidifying units may be necessary where extremely dry conditions prevail and are available from Fresh nd Aire Company 221 North LaSalle Street, Chicago 1 Parks-Cramer Company Fitchburg, Massachusetts and the Walton Laboratories, 1186 Grove Street, Irvington 11 New Jersey The usual precautions should be taken to keep the film free from dirt

Damage to film resulting from handling or projection should be repaired immediately Simple repairs may involve splicing only Extensive damage may require replacement of the film. The equipment necessary to

make repairs includes a splicer a set of film rewinders, carbon tetrachloride, white cotton gloves, a piece of black velvet, cleaning tissue, and film cement. Additional information on the care and repair of film is to be found in the section on microfilms.

Projectors

Projectors are of two types, standard and classroom. Standard models can be used for almost all purposes, in the auditorium and in the classroom. They weigh about eighty pounds and are more expensive than classroom models, ranging in price from $300 to $700. Classroom models, usually portable, weigh between thirty and sixty pounds and are priced under $400. They are not adequate for auditorium use.

When purchasing a projector Galvin (10, p 48–50) states that the library should consider one which will meet its needs and give satisfactory service, one whose weight the library staff can handle, and one which can be serviced locally He stresses eight points to be observed in projectors illumination simplicity of operation and protection of film simplicity of upkeep tone quality and volume steadiness of screen image, focus projection noise and special features, such as reverse film movement.

Every projector is supplied with an instruction book or manual with which the operator should familiarize himself in order to obtain the most efficient service from the machine. Keeping the projector clean is essential dirt in the film track will scratch the film dirt in the sound head will distort the sound. A valuable projector cared for properly will give good service.

Television

Television is becoming an important factor in the teaching of medicine. According to Malcolm T MacEachern, formerly associate director as well as chairman of the administrative board of the American College of Surgeons and now director emeritus "Television combines ideally all the best elements of eye-ear instruction this development will make for better surgeons, better medical education and improved health service to the public. (64 p 605) At the present time four medical schools (70)—the University of Kansas (67 71–72) the University of Chicago, the University of Pennsylvania, and Albany Medical College—have television installations for teaching purposes, but as yet there is no report of any such installation in a medical library

Those interested in acquiring information about the installation, types, and costs of television equipment and its advantages and disadvantages in medical teaching should consult the article by V F Bazilauskas, B. V

Dryer and D S. Ruhe (65) Descriptions of television demonstrations in black and white and color in medical school teaching, clinics, graduate teaching and society meetings may be found in References 62–64 66, 68, 69 73 74 Current information about television developments may be found in the *Journal of Medical Education*

Facsimile transfer

A new type of reproduction equipment (76–79) which may prove *revolutionary in speeding up interlibrary loans and reference service has* been developed by the Radio Corporation of America for the Atomic Energy Commission. It is a facsimile transmitter operating through an electronic device, the equipment consisting of a flat-bed scanner or transmitter and a receiver recorder The transmitter located at the sending library is connected by telephone wires to the receiver at a laboratory or library some miles away The device can scan and transmit in one minute a page, map, or illustration to the recorder It will handle single sheets or books up to three inches thick and will give up to four times magnification of the original copy Copy is produced on chemically treated paper black on white, and is ready for use immediately The device not only saves time for the worker but makes the same volume available in several places, and prevents contamination of the library's volumes by radioactive materials, an ever-present danger in atomic energy projects.

The installation originally set up at Oak Ridge, Tennessee, has been transferred to the Loan Division of the Library of Congress for experimental use. Scott Adams (75) in a recent paper discussed the possibility of using the equipment for a facsimile network among federal libraries in Washington as a means of sharing their tremendous resources with each other more quickly and eventually more cheaply in place of the present interlibrary loan system.

Lantern slides

T S. Jones (82) claims that lantern slides, properly used, are the best graphic medium in lecturing However most libraries do not need to keep large numbers of lantern slides except on historical and biographic topics. They can be used for instruction in the use of the library for example, various views of the library examples of catalog cards, circulation cards, pages of the *Quarterly Cumulative Index Medicus* can be projected. Large collections of lantern slides are usually found in medical schools in a central file for the use of all departments or in such departments as pathology surgery bacteriology anatomy and physiology where they are administered by the departments. In one case a dental library (83) acts as the

custodian for Kodachrome slides belonging to the head of the Oral Medicine Department.

A pamphlet, *Lantern slides and how to make them* is offered free of charge by the Educational Sales Division of the Bausch and Lomb Optical Company Rochester New York. An inexperienced person can easily learn to operate a lantern slide projector

Lantern slides are made of glass or of 35mm. film. Standard American lantern slides (10 p. 11–12) measure 3¼ by 4 inches and 2 by 2 inches (80) The latter size is used for 35mm. film. Glass slides chip and break easily and are heavy and expensive to ship on the other hand, their rental cost is low and they will not curl or buckle under the heat of the projector lamp, permitting examination of material for reasonably long periods of time.

Film slides in black and white are made from 35mm. film in 2 by 2 inch cardboard glass, metal or plastic mounts. They are inexpensive substitutes for glass slides, easy to handle and light in weight. Two by two inch Kodachrome slides in full color are also available. They have the same mechanical advantages as the black and white film slides, and color enhances their educational value. The dyes in color films, however are affected by high relative humidity and heat (81) and both black and white and color film slides are subject to damage by scratching from careless handling and dust. Too long and too frequent use in a projector causes buckling of the film and loss of color

Sources

Slides are usually made to order but they may be obtained by purchase, on a rental basis, or on loan from commercial establishments and educational institutions. Names of establishments and institutions which furnish ready-made slides are

American Dental Association, 222 East Superior Street, Chicago 11, Ill. For professional and lay groups. 2 by 2 in. slides rental, $1.50 per day $3.50 per week by subject (slides in each subject vary in number from four to sixty six) plus the return shipping charges sale $1.25 each for Kodachrome, 90c each for black and white. Made to order for the purchaser from material furnished by him.

American Medical Association, 535 North Dearborn Street, Chicago 10, Ill. Rents to physicians, health officers and educators.

Clay Adams Co., Inc., 141 East 25th Street, New York 10, N Y "Medichromes on anatomy bacteriology dental pathology hematology medicine, nursing procedures, obstetrics and gynecology ophthalmology and otolaryngology orthopedics, pediatrics, tropical diseases, tuberculosis and urology $1 per

slide between glass, 80c per slide in cardboard readymounts. 50 slides less 5 per cent, 100 slides less 10 per cent.

Denoyer-Geppert Co 5235 Ravenswood Avenue, Chicago 40, Ill. "Cartochromes, 2 by 2 in. Kodachromes for the biological sciences. Usually sold by the set.

Indiana University Extension Division, Bloomington, Indiana. Rents slides on health and welfare charges by the day Shipping charges extra. Preference given to Indiana residents.

Iowa State University Extension Division, Iowa City Iowa. Loans in Iowa and neighboring states. Service and breakage fees.

Keystone View Co., Meadville, Pa. Sells slides on hygiene, teeth, circulation, respiration, digestive system.

Dr Harry E. Morton, Department of Bacteriology School of Medicine, University of Pennsylvania, Philadelphia 4 Pa. Sells and rents slides on microbiology

New York State Department of Health, Albany 6, N Y Loans film slides to residents of New York State free of charge.

Society for Visual Education, Inc., 1343 West Diversey Blvd., Chicago, Ill. Sells 2 x 2 in slides, filmstrips, Kodachromes.

U S Armed Forces Institute of Pathology Medical Illustration Service, Washington 12, D C. Loans slides.

Victor Animatograph Corporation, Davenport, Iowa. Rental and sale of glass lantern slides.

The following institutions make lantern slides to order

American Dental Association, 222 East Superior Street, Chicago 11 Ill.
Columbia University New York 27 N Y
Keystone View Co., Meadville, Pa. From customers negatives, photos, cuts, $1.10 to $2.50.
New York Academy of Medicine, 2 East 103rd Street, New York 29 N Y
University of Pennsylvania, Philadelphia, Pa
Victor Animatograph Corporation, Davenport, Iowa.

Care

Slides may be filed on edge in a partitioned box or drawer Each slide should be numbered. Trays and cabinets for storing slides are available commercially from Clay Adams Company Inc., 141 East 25th Street, New York 10 Eastman Kodak Company Rochester 4 New York Remington Rand Company 315 Fourth Avenue, New York 10 and the Technicon Company 215 East 149th Street, New York 51 The Multiplex Display Fixture Company 369 Lexington Avenue, New York 17 manufactures an all steel filing cabinet equipped with slide-holding frames for either 3¼ by 4 inch or 2 by 2 inch slides or a combination of the two. The

door of the cabinet, when lowered serves as a shelf on which the frames rest while the slides are being viewed without handling Slide-holding capacity ranges from 2,080 to 6,240 slides, depending on the model chosen. An index to the slides may be located on the door Each slide must, of course, be numbered appropriately to insure its return to the correct location.

If negatives from which slides were made are retained, they should be stored in manila or cellophane envelopes of the correct size and labeled with the slide number and other pertinent information.

Printed forms are usually used in circulating slides, which are charged out by slide number The forms contain space for the name and address of the borrower the number of slides borrowed, date issued, date due, date returned, damages incurred, rental, and total charges.

Projectors

Lantern slide projectors may be obtained from the following companies

American Optical Co Scientific Instrument Division, Buffalo, N Y
Ampro Corporation, 2835 North Western Avenue, Chicago 18, Ill.
Bausch & Lomb Optical Co 635 St. Paul Street, Rochester 5 N Y
Bell & Howell Co., 7100 McCormick Road, Chicago 45 Ill.
Eastman Kodak Co., 343 State Street, Rochester 4 N Y
GoldE Manufacturing Co., 4888 North Clark Street, Chicago 40, Ill.
Society for Visual Education, Inc., 1343 West Diversey Boulevard, Chicago, Ill.
Three Dimension Co., 4555 West Addison Street, Chicago 41 Ill.

Some projectors fill a dual purpose, with attachments or adapters so that they can project various sizes of slides and filmstrips.

Photographs

Picture collections in most libraries contain photographs of medical men, hospitals, and institutions which are of local interest or have associations for the particular library Although photostats are less expensive than photographs, photographic prints are preferred for portraits and illustrations. Moreover for reproduction purposes a sharp, clear glossy photograph is essential.

Sources

Many libraries make a practice of collecting photographs of faculty and staff members, past and present, and of members of local medical societies. These are usually obtained by making requests directly to the

prospective subject or to his family or friends. H. H. Cambell (85) reports that the Armed Forces Medical Library obtains portraits of well-known contemporary medical men by personal letter from some known source of supply or by purchase. A number of institutions—among them the University of Chicago Columbia University Yale University the New York Academy of Medicine, the New York Public Library the Armed Forces Medical Library and the Library of Congress—furnish photographic copies of material in their collections.

Care

Although they may be filed in boxes, a standard legal size vertical file is most practical for storing photographs. The Armed Forces Medical Library (85) files its mounted pictures in envelopes made of heavy blue stock, in portfolios, or in solander boxes. P M. Strain (86) suggests that photographs may be mounted filed in 3-ring loose-leaf binders, or pasted in scrapbook binders for easier handling These methods, although expensive, have the advantage of making the pictures available for exhibition or lectures, of keeping the prints together and of lessening the danger of loss. For scientific and technical libraries Strain advocates the use of folders or envelopes in a vertical file as being cheaper and less bulky The disadvantage of this method is that prints are more difficult to handle and more liable to be lost.

Large photographic collections, such as that of the Library of Congress, described by E. L. Adams and Marion Lambert (84) require special care. Prints are mounted on gray cardboard and filed in drawers. Cardboard dividers in the file are labeled with class number and subject, and each photograph is captioned with place, date, name of photographer and a single sentence describing the photograph. The photographic negatives are stored in an air-conditioned vault for safekeeping

Portraits may be framed and hung on the library walls, filed in a vertical file, or arranged in display equipment such as that manufactured by the Multiplex Display Fixture Company already described under Lantern Slides. Displaying photographs in this manner gives assurance of easy accessibility and protection from dust and handling This equipment recommends itself to society libraries for displaying the portraits of its membership

Cost

The cost of a 5 by 7 inch negative is approximately $1 to $1.50 of a 5 by 7 inch print, 20c to 35c The Armed Forces Medical Library makes photographs for 50c each.

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chapter 10

Public relations

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THE PURPOSE OF PUBLIC RELATIONS in libraries is to ensure an enthusiastic liaison between the library personnel and those who come to the library for assistance. Its intent is also to provide an extension of this friendly spirit of cooperation to all who may or should be interested in the services and welfare of the library. One of the best definitions of public relations is "Public Relations is the management function which evaluates public attitudes, identifies the policies and procedures of an individual or organization with the public interest and executes a program of action to earn public understanding and acceptance." (15, p. 4) Applying this definition to medical and allied libraries would mean that a program of public relations should provide alert, competent, and interested service to all patrons for whom the library was established, inform the public to be served through various forms of library publicity media, of the types and scope of services available, and place equal emphasis upon skillful service and the spirit of service.

Planning a public relations program

The part played by the library staff

The first essential of a public relations program is sound internal organization of the staff. The attitude of librarians towards patrons is mirrored in public opinion of the library's fulfillment of its purpose. Low staff morale engenders inefficiency and poor public relations.

The personality of a staff member is as important as his ability; both factors must be considered. The job specifications for new librarians should stress both attitude and service to the public as prerequisites of successful employment. This factor of personality is not intangible. The characteristics

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desirable for those who enter library service have been analyzed (see Chapter 3) Librarians should realize, however that staff members who possess agreeable personalities may yet unconsciously neglect some of the basic principles that are essential for courteous and cooperative service to patrons. The library staff should be made thoroughly aware that successful public relations depend upon the continual placing of emphasis upon such details as

A friendly greeting to all clientele—especially to strangers.
A soft voice, particularly in the reading room.
A low friendly voice over the telephone. (The booklet, "How to Make Friends by Telephone, (34) *is recommended particularly to circulation and reference librarians* and to switchboard operators.)
An alertness to help. (Nothing is more discouraging than a library assistant who seems too busy to bother with a patron s problem.)
An immediate referral of a specific request to that staff member best prepared to give assistance with the least delay (Student assistants should know the special duties of the senior library staff)
A willingness for extra effort above the call of duty

The ability and knowledge of a library staff can be increased by various means. Continued improvement in service to the public and in the acquisition and processing of material must be constantly sought. This improvement can be achieved if the librarian and the library staff become thoroughly acquainted with library facilities and with the specific aids for literary research in medical and allied fields. They should read all available professional material, should attend conferences and meetings, should visit other libraries, and should be constantly seeking new ideas to try in their own libraries

New library staff members should receive some formal introductory instruction, especially those who have never worked in a medical library A comprehensive article on in-service training prepared for government libraries (43) can be adapted to many types of special libraries. Information concerning terminology and the uses of catalogs, reference books, indexes, and periodicals should be clearly presented. It is helpful to have mimeographed sheets of the main medical prefixes, suffixes, and medical combining forms prepared to give the new employee. He may be assigned the same material prepared for students, if a course of instruction in use of the library is given. If the library is a large one, the reference librarian may conduct a course in use of medical reference material so that all the staff will be prepared to serve in the reference department in case of emergency Sample reference questions requiring difficult research or

calling attention to material not often used may be kept on file so that new staff members may become more proficient by studying them. A record should be made of every incident leading to approbation or criticism of library service. An analysis of these successes or failures permits preparation of a precedent sheet to guide new employees in the solution of difficult problems.

Understanding and appreciation of the public relations program

The librarian must keep in close contact with the staff and must make certain that the staff thoroughly understands and appreciates the public relations program to be carried out. Notices of new developments—especially lists of names of donors of gifts—should be posted immediately where the staff will see them.

The librarian should hold periodic conferences on the library's public relations policies with each staff member. He can thereby obtain more detailed and confidential opinions and suggestions than would be possible in meetings where the whole staff is present. If the librarian thinks it advisable, he may present the suggestions at the next staff meeting and ask for discussion of them.

Staff meetings provide a most satisfactory means for stressing the library's public relations program. The purpose of a staff meeting is to bring up points of procedure which are already being carried on in the library or which are in the process of being instituted, improved or removed. A general discussion serves to review the services being performed and the attitudes and ideas of the staff members performing them. Excellent suggestions for improvements in service are often brought forth. The head librarian as the leader can, by wise guidance, encourage the concept that medical librarians are important members of the team meeting the health demands of the community.

Staff journal clubs serve as a successful means of fostering a professional spirit among the members. The main purpose of such a club is to give information on an international scale to the library staff and to apply this information to the individual library. The club program may consist of reviews of the current professional library articles which are particularly applicable to the problems and interest of the staff, or of short reviews on important new medical books or journals, particularly on recently added reference books. Journal club time should not be taken up with announcements, business, and routines that can be considered at a regular staff meeting. If the library is small, with only one or two staff members, it may be possible to organize journal clubs with the staff members of other local libraries. Such meetings may be either dinner or after-dinner occasions.

The library's setting

The setting of a library plays an important part in the determination of its services. It is necessary in planning a public relations program to consider the history and location of the library A librarian who fails to do so may unknowingly offend some individual or some group of present or possible patrons. Sometimes a library is established in a section of the city which is inconvenient for some members of the profession who consequently feel that they have been discriminated against. Their resentment can be changed to appreciation if the librarian makes every effort to facilitate service to them by means of special delivery service or in other practical ways. Perhaps there may also be a few members of the professional group especially in a society library who are unwilling to contribute to the support of a library They contend that they can obtain the literature they need from *package libraries sponsored by national organizations to which they belong.* A wise librarian will make opportunities to focus attention on the prompter service and the more comprehensive and current material which can be obtained from a local library

There may be a group who desired to have some special person appointed as librarian and whose suggestion was overruled by the Library Committee or Board of Directors when a candidate was appointed. Such a situation may present difficulties for the new librarian. It is helpful, therefore, to know the developments leading to the establishment of the library so that one may endeavor to settle the internal dissension relating to it. It is clearly up to the librarian to see all sides of disagreements about the library and to amalgamate the various points of view for the good of the entire group of patrons.

Most librarians realize the importance of the appearance of the library and of the library staff They know that well dressed, pleasant people and attractive, agreeable surroundings add immeasurably to the status of a library In checking the housekeeping and appearance of the library the librarian should ask the following questions

Is it light? This query applies to stacks as well as to reading and study areas. Attendants should periodically check all lighting facilities. If light switches are hidden or difficult to find this condition should be remedied or adequate directions should be posted

Is it clean? Are books, tables and chairs carefully dusted? Many of the medical library's clientele wear crisp, white uniforms. Constant attention should, therefore, be paid to this aspect of housekeeping

Is it neat? All books and journals should be returned immediately to their proper places.

Is it comfortable? Study areas of a library should have correct posture chairs. If space and budget permit, a library should have a reading or browsing area with comfortable armchairs. Air conditioning for the reading room contributes considerably to successful public relations, especially in warm localities.

Are there adequate working areas where a patron may spread out all the material that he may need at one time?

Is smoking permitted in certain areas? Some patrons can do much better work if they are permitted to smoke. Others prefer a room where smoking is prohibited. Consideration should be given to both groups.

Are there attractive displays? These are means of promoting interest in the library's material as well as of making the library look colorful and decorative.

Are there attractive flowers and plants? Patrons respond to flowers in the library. The librarian may, by a subtle hint or suggestion, encourage the frequent visitors to bring flowers from their own gardens for use in the library. The name of the donor may be typed on a card and placed at the base of the vase or container. If the flowers are of an unusual variety, the botanical name or some other interesting information may be added to the card.

Are deficiencies spotted and remedied? This means that there must be regular reading of the shelves to see that misplaced volumes are returned to their proper place, periodic checking of furniture and equipment to see that all are in satisfactory working order, and daily checking of supplies needed by patrons—especially of such items as call slips at the catalog.

If these questions can be answered in the affirmative, the library setting is then indeed an excellent one.

Determination of policies

In drawing up a plan of public relations, the librarian must have a thorough knowledge of the public to be served and of the services expected. The plan must be sensible and workable, and it is more helpful if written down. There is no point in drawing up an elaborate program. Public relations are simply a matter of continually serving the library's patrons to the best of the staff's ability. Once the plan is made, it is up to the librarian to convince the administration of its worth. A pertinent and graphic presentation of posters prepared by the Public Relations Committee of the Special Libraries Association (37) will be helpful to librarians in assembling data of particular interest to administrators. Most administrators, when presented with adequate reasons, accurate statistics, and a thorough explanation of a well thought out program, are willing to give it as much

help as possible. As the program progresses, the librarian and his staff should develop the ability to see and correct deficiencies when they appear Flexibility in order to meet new needs, both in matters of policies and of regulations, is essential in library administration. A librarian must know how to evaluate public opinion. It is impossible, even with excellent service, to please all people. Librarians, therefore, should not be daunted by crit icism. It is important, however to listen to it and to evaluate it, and to change methods when warranted A rule or method should not be changed simply because one or more persons have objected to it. The good of the group as a whole should be the major consideration. If the necessary rules are explained and the reasons behind them are adequate, patrons are usually willing to cooperate.

A public relations program must be planned from a long-range point of view The librarian should understand that, in the beginning, a library cannot offer all types of services. The services to be offered must first be formulated, tried and then they may be fully used and perhaps expanded The program must not promise anything it cannot deliver A small library should not attempt to give the elaborate services of a large library if it is not prepared to do so. Lastly there should be never-ending vigilance and continual discussion among the library staff so that the library's relations with its public will not become stale and perfunctory but will retain their freshness of spirit.

Carrying out a public relations program

Types of clientele to be served

The alert librarian will devote much time and thought to a study of the library's clientele, in order to develop and utilize to the utmost the interests of the groups which compose it. In medical and allied libraries the clientele usually consists of four types the professional group related professional groups, lay clientele, and other libraries. Leaders of the various groups should be consulted in formulating policies of service.

The first consideration should be for the professional group. This includes all the professional and semiprofessional people connected with the school, hospital society institution or company to be served. Service to them should be emphasized above all others, because on this group depends the success of the whole organization. In determining the type of service to be given to this group, the librarian may be guided by the services desired as described by a medical student, a graduate student and a faculty member in the Medical Library Association's symposium on service at its 1951 meeting (16, 18, 24) The viewpoint of the research patron is stated by Fred A. Mettler (28)

The following are some effective ways by which the best service may be provided for the library's immediate professional group The size of the library staff will be a determining factor in carrying out some of these recommendations.

The librarian should become thoroughly familiar with the teaching and research projects of the organization. In society libraries the librarian should make every effort to learn the special interests of the members. Such knowledge is essential in determining the library's program of acquisition.

The librarian should consult with the participants of these projects and with special representative officers or committees on the selection of material.

Patrons should be notified when material which they have requested is received.

The granting of special privileges, such as extended or research loans, requires judgment and tact and should be determined with care and discretion.

New journals may be routed to interested patrons as soon as received. This service is particularly applicable in research organizations where the offices of the borrowing clientele are located close to the library It may however prove quite unsatisfactory in school libraries or in large society and hospital libraries.

Duplicate copies of the most used books and journals should be obtained if possible, so that one copy may always remain in the library

Certain material may be specified as noncirculating so that it will always be available upon call.

Hours of opening should be regulated for the convenience of all patrons. The needs of students, with particular reference to Saturday and Sunday use of the library should be given special consideration.

Special consideration should be given to the resident staff of a hospital, even when the library is closed. Their access to the library is necessary at all times. This service can be supervised through a carefully controlled system by which the key to the library located in a central office, is given to a doctor after he has signed for it personally

Card files of bibliographies of persons connected with the organization should be compiled and maintained.

Reprints of articles by members of the organization's clientele should be collected and bound periodically

If the library serves a clientele of limited proportions, pains should be taken to see that all their publications are entered in the catalog, including analytics for chapters in books.

Clipping files of personal and professional information about the organization's patrons should be maintained.

Journal articles and books by local authors should be displayed either individually or as a group

Particular emphasis should be placed upon reference service (see Chapter 11)

Where possible, a bibliographic service should be maintained whereby material is regularly noted and reported to the interested investigator (14)

Up-to-date information on local and national translating, abstracting and manuscript services should be kept on file, if these services are not within the scope of the library staff

Editing services may be extended wherever feasible. Cooperation in the preparation and revision of articles is most gratefully appreciated by the professional clientele.

The second group the related professional clientele, is composed of patrons not directly connected with the organization—physicians, dentists, nurses, research personnel or scientists who may be local residents or may be from farther afield. These are the patrons for whom the library was not directly established but whose interests are similar to those of the primary users. The best service possible should be given to them. If their needs can be more satisfactorily or suitably met by another library this fact should be called to their attention however local allied professional patrons can become very good friends and promoters of the library The librarian should become acquainted with them and should endeavor to interest them in the needs of the library

"Members of non-medical professions usually have specific questions or technical data to look up, and, while they will require more individual aid than members of the medical profession, they do not offer any special problem Some of the non-professional laity however will often need extremely tactful handling on the part of the librarian. It is not a function of the library to recommend physicians. Individuals making inquiries of this type are best referred to a local hospital or medical society When medical advice is sought, caution is necessary and the librarian should not answer questions concerning treatment or the interpretation of symptoms or of laboratory tests, blood tests, etc. Those requesting such information or books on specific diseases should be advised to consult their family physicians. Often kindly courteous explanations as to the difficulty of interpreting technical statements without the necessary professional background will discourage attempts to obtain information through reading When patrons insist, it is best to give them as reliable and unalarming

information as possible. Refusal usually only sends them elsewhere, but the diplomatic, friendly librarian can frequently steer them back to a physician without their getting access to material which might result in undue anxiety When readers are referred by their physicians to specific books, they present no problem." (10 p. 380)

Other libraries may also form part of a library's clientele. The interests of a community or a region as a whole are furthered and economies often result if libraries cooperate with each other in their programs of acquisition, in interlibrary loans, in union catalogs and in various other services. It is helpful if the staffs of the local public library and of other nonmedical libraries are advised of the medical library's policy regarding nonmedical clientele, so that their cooperation may be obtained.

Methods of offering service

Through the routine procedures connected with borrowing and lend ing the public comes face to face with the library's activities and forms its opinion of the library's attitude and spirit of cooperation.

The circulation department should be the show window of the library To many patrons it is the only division with which they come into actual contact. If the circulation personnel are gracious and cordial, then the patron's impression is a pleasant one. The effect of the library's service policy as demonstrated by the circulation department and carried out by it from day to day is vital to the success of the library Members of this department should be firmly grounded in the fact that they are the liaison force between the library and its users. Theirs is the unique privilege of having every opportunity to win and keep friends for the library Routine circulation services must be adapted to the needs of the public to be served. Procedures should be as simple as possible and conducive to the welfare of patrons as a whole. This means that there must be rules, but in a special library such rules may be kept to a minimum (36, p. 68–71) Few medical and allied libraries are large enough to need complicated charging systems. The arrangement of open stacks should be convenient and accessible, as this is a basic factor in determining the most efficient use of the library

Interlibrary loans are important parts of a library's public relations program. This service presents a problem to the small library which is constantly borrowing, as well as to the large library which must devote much time to the work involved in lending material. Librarians of both types of libraries should strive to maintain a fair balance between justifiable service and abuse of privilege. Those of large libraries must remember that their collections often provide the only resource for small libraries. Those of small libraries should realize that often their requests may be directed

to libraries which are already serving to their utmost capacity Librarians on the whole wish to give as much consideration as possible to requests for loans. The amount of service that can be provided, however will vary with the size of staff the number of requests and the policy of each library Before requesting material from another library it is an advantage to have first hand acquaintance with its staff and knowledge of its reference tools and of its collection. The staff of the borrowing library should be instructed not to ask for information which is beyond the scope of the lending library or for material which is likely to be in frequent demand there. Consideration and cooperation should be foremost in all interlibrary loan transactions. For methods of interlibrary loans, see Chapter 11

Another service which increases the efficiency and usefulness of a library is the acquiring of material not in its collection by means of photocopies (see Chapter 9)

Reference service is probably the most important of all services to a library s users. A patron who has received help on a difficult reference problem is likely to become one of the best supporters of the library A library which does not endeavor to give its utmost in reference work is failing to fulfill one of the main essentials of successful public relations. For methods and tools of reference, see Chapter 11.

Extension service is not widely given by medical libraries. A questionnaire circulated by Helen Crawford of the University of Wisconsin Medical School Library showed that there is a decided need for more service to physicians in rural areas where there are inadequate library facilities *(6)* The general state library extension agency and the library commission do not fill this need. Traveling libraries operated by these agencies rarely contain medical books other than those of a popular nature. Extension services differ from interlibrary loans in several ways, the chief and most important of which are that material is sent directly to individuals rather than to libraries, and that current issues, reference books, and journals and unbound material may be borrowed Such material cannot usually be obtained on interlibrary loan. Consequently the filling of such requests contributes a real service. This service is not inexpensive. It requires funds for extra copies of the most needed journals, intelligent reference work and good clerical service for prompt attention to receipt of requests and mailing of books, in addition to skillful administration by a librarian who must conduct and publicize this function. Publicity may be obtained by articles in state and county medical society journals and local newspapers and by lectures at society meetings. Extension service is by its own nature a function of a state or regional organization, since its purpose is the provision of library facilities to those who would otherwise be without them. Medical

educators have expressed the hope that medical library service may be extended through state medical associations and state medical school libraries. The need for extension service is widespread and its value is immeasurable. Practical suggestions for libraries contemplating establishing such service are the following

If possible, an affiliation should be made with some association receiving publications in exchange for its own journal and review copies of books.

Files of unbound duplicates should be maintained for mailing Removal or obliteration of the advertisements permits mailing at a special library rate. Unbound copies are also valuable for supplementing the permanent copy for local use when the latter is in circulation or at the bindery

Supplementary gifts from staff members and other doctors are useful, but it is almost essential to have complete recent files of the major clinical journals available promptly

Unbound journals rather than reprints should be used because the latter are often impossible to obtain.

Time-consuming services, such as routine mailing of each issue of a journal to any physician requesting it, should not be attempted.

A policy of service to laymen should be established (6)

Teaching the use of the library

Teaching the use of the library is one of the library's essential functions. The relationship to the library of all groups of clientele depends upon this service. Library instruction is rapidly becoming a part of the regular curriculum in professional schools, but many of the older members of the profession have had no such training Each librarian must, therefore, try to find the best way to give instruction in the use of his library and its bibliographic resources.

Before embarking upon any instruction program, the librarian should make sure that the library is as conveniently arranged as possible and that signs and directions are placed where needed A map of the library should be hung in a prominent spot.

Instruction to students

There is no single method for teaching the use of the library to students. The basic tool for all such instruction may be a handbook which will serve as a written introduction to the library and as a permanent source of information. A copy should be given to each student. A library syllabus like the one prepared by the University of Tennessee College of Medicine Library Staff (40) is more elaborate, complete and expensive than a hand-

book and can also be recommended as an excellent form of basic guidance. Illustrated booklets of instruction on certain parts of the library such as the catalog and the indexes serve as detailed visual instruction and can be placed where needed (5) The scope of the material used in the course is a matter of individual organization The librarian should endeavor to make the course interesting practical and helpful. The student must be impressed with the fact that the knowledge of how to use a library is essential to his profession. Instruction may be given by formal or informal courses however it is a hopeful sign that more formal courses are being instituted in medical and allied schools, as shown by the report of the Medical Library Association s Committee on Criteria for Medical School Libraries, April 6, 1953 (27) A panel discussion on the teaching of medical bibliography to medical, dental and pharmacy students, research clientele, graduate physicians, and to medical and allied librarians, presents a good over all picture of the instruction now being followed in libraries throughout the United States (2, 11 17 25 29 32) A perusal of this symposium will be helpful to librarians wishing to institute a teaching program. A study of the booklet of instruction by William D Postell (31) will also be helpful.

Formal courses of instruction require detailed planning Some librarians may feel that they cannot devote the necessary time to an extensive program. "But it could be that time spent teaching students how to use the cards already in the catalog and other library facilities might be more valuable to the students than time spent adding more and more cards to an unused catalog It is a question of time use which comes perilously close to that two-headed dragon, 'Libraries for librarians or Libraries for students?' (21 p 366) Formal courses should include lectures, assignments, and tests. The actual extent of a formal course of instruction depends upon the time available and upon the period when the course is given (9 30 33) Some schools prefer to schedule it in the first year and some to extend it to the clinical years. The ideal arrangement probably would be an orientation course in the first year which would be followed by *several lectures each year throughout the last three years. Instruction* in scientific writing should be given or reviewed during the senior year If the course is held during the first year it may serve as an orientation course and may include other subjects, such as philosophy of study professional terminology scientific writing and history Every course, however should include specific lectures on catalogs and indexes, reference books and periodicals, and information on the arrangement of the library and its special collections. Each lecture should be followed by an assignment on the material covered, given during the laboratory part of

the instruction or as outside work. It is helpful if library courses can be given in conjunction with work on a term paper required by one of the teaching departments, as is done by Eileen R. Cunningham (9) If this cannot be arranged, the librarian might assign subjects to the students and require them to do at least the preliminary bibliographic work that is necessary for the preparation of a scientific paper An examination should be required and the course should be graded so that students will devote more than cursory attention to the material.

Informal courses of instruction may be given if no arrangement can be made for formal, required courses. They should include a conducted tour of the library and an explanation of the library's resources and arrangement. Indexes, periodicals, and reference books can be examined separately and in detail. Instruction in the preparation of bibliographies should be stressed. If these informal courses are made interesting and helpful, more students will ask for them and thereby perhaps lead to the establishment of formal courses in all professional schools.

Sometimes the curriculum is so crowded that there is not time for a separate course, making it necessary to arrange some library instruction in connection with a course in one of the teaching departments. The lectures may be given by the professor or by the librarian. The practical instruction, however should take place in the library Examples of this form of instruction are the courses at Emory University School of Dentistry where a course in technical composition is conducted at the University of California Medical Center where instructors in the division of medical history and bibliography are available for consultation in connection with the preparation of manuscripts and the compiling of bibliographies and at the University of South Dakota School of Medicine, where two courses are given—one by the library staff the other a correlation seminar under the direction of the faculty of the School of Medicine. In this seminar the second-year students present surveys of current progress in medical fields. When library instruction is given by a teaching department, it is helpful if it is planned in conjunction with a term paper required by the department, thus insuring practical use of the library by the student.

Whatever the curriculum arrangement may be, the librarian should see that students receive some instruction. They should be taught to help themselves. "The librarian should no more do the student's and the teacher's bibliographical work for them than the laboratory instructor should make the technical pieces that are required in prosthesis and operative dentistry or do the experiments stipulated in chemistry physics, or physiology (12, p 245)

ians should become proficient in its preparation. The chief purpose of publicity is to promote a realistic knowledge of the library and its good works. This knowledge enables patrons to make better use of the library, administrators and the library committee to understand and sympathize with its problems, the library's own staff to increase interest in their jobs and be inspired to better service, and all, both within and without the organization, to realize its needs and be stimulated to donate money, books and other materials.

Chief among the library's forms of publicity are reports. Every library should make some form of annual report to its patrons. Reports covering a longer period of time—five or ten years—are also most helpful in presenting a comprehensive picture of the library (8). Reports should first be interesting and attractive. Librarians who compile monotonous mimeographed accounts dealing principally with routine will find the reading of a professional textbook (38) on this subject to be profitable. Reports should place emphasis upon the library's special activities, its vital services, and its program for the future. As much money as the budget will allow should be spent on them, for if they are read and assimilated they may bring forth generous support.

Items to be included in reports are: book collection, size and gaps if advisable; use of library, circulation, and attendance; acquisition statistics; cataloging statistics; staff information; budget; equipment; added construction or improvements in building; instruction in the use of the library; special features of administration; special accomplishments in the field of public relations or in cooperative projects; work of special departments; and plans for the future. Some specific suggestions for the preparation of reports are: avoid technical library expressions in favor of a readable style; include illustration (in color if the budget permits); include statistics in graphic form; provide an attractive format and cover. The report, especially one covering a period of years, should if possible be printed. If the library budget will not permit this, the librarian might try to obtain funds elsewhere. The names of the donors of funds for printing the report should occupy a conspicuous place in it. A list of discerning, interested persons to whom the report will be sent should be compiled.

Careful consideration should be given to every written item that goes out from the librarian's office, whether it be a notice for an overdue book, a request to an administrator for an increase in budget, a memorandum giving instruction to the staff, or a letter of thanks to a donor for a valuable gift. In connection with this suggestion, it cannot be too strongly impressed upon librarians that study of the techniques of writing is a necessary part of their education. The following are some suggestions for library communications:

the instruction or as outside work. It is helpful if library courses can be given in conjunction with work on a term paper required by one of the teaching departments, as is done by Eileen R. Cunningham (9) If this cannot be arranged, the librarian might assign subjects to the students and require them to do at least the preliminary bibliographic work that is necessary for the preparation of a scientific paper An examination should be required and the course should be graded so that students will devote more than cursory attention to the material.

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Instruction to professional patrons

Libraries, like people, have their individual distinctions. One cannot learn one library and thereby know all others. Librarians should see that all professional newcomers are given an introduction to the library and a thorough explanation of its resources. In hospital and medical school libraries, particular attention should be paid to the resident staff, who will probably be among the most constant users of the library It is a good idea to schedule a general lecture for interns and residents at the beginning of their hospital service. This lecture should include an introduction to the library—its arrangement, resources, rules, and general policies. If the library extends special privileges to the faculty and house staff, this is the best time to mention these privileges. Each doctor may be given a copy of the library handbook for future reference.

An innovation which has been most helpful at the University of Alabama Medical Center Library has been the scheduling of conferences, by specialty for the residents. These have been arranged by mutual agreement between the head of the department and the librarian. The librarian conducts the lecture, but often the professor and members of his senior faculty take part. Representative material pertaining to the specialty is available at the conference table for examination, including all specific reference books —such as specialty dictionaries, directories, and encyclopedias—together with specialty and abstract periodicals and illustrative material consisting of pictures and portraits. Either a list of the new books on the specialty or the actual books themselves are also at the table. Particular stress is placed upon the use of medical and allied indexes and the card catalog In addition to the library handbook, each doctor is given a copy of a primer on scientific writing (7) These conferences enable the residents to keep in touch with all material available in their field

The full-time faculty of medical, dental, nursing, pharmacy and veterinary schools, as well as research personnel of commercial firms and research institutions, will need a thorough knowledge of the library and its materials. Through personal conference each new member can be informed of material on his subject available in the library and be asked to request any material he feels should be added. Any difficulties that may arise about library policy should be settled. Annual conferences by department should be arranged if possible so that all members of each department may be kept informed of new developments in the library It is necessary for the library and departmental staffs to work cooperatively thorough knowledge of both departmental and library problems will bring about mutual understanding and facilitate future work.

Part-time members of the faculty will probably want at least a casual

introduction to the library as will practicing clinicians. They will need to know what material is available, but it is probable that a great deal of their use of the library will be by telephone. They present one of the largest demands upon library service, because their limited time prevents their actually searching for the material they desire.

In all introductory conferences, the librarian, in addition to telling of the holdings of his own library should give information on the facilities of neighboring libraries.

The problems of society and public health libraries differ from those of school and institutional libraries. Their clientele is more scattered and it may be difficult for them to offer instruction by conferences or lectures. Many of them, however are fortunate in having bulletins which will carry articles on library procedure. An excellent example of this type of instruction is the article on special files in the New York Academy of Medicine (35) These libraries patrons will find a detailed library handbook a useful guide, and they will need more printed signs and directions than may be necessary in other libraries. Individual instruction to newcomers will also be essential.

One of the best forms of public relations with professional patrons is a series of conferences on the physician s own library such as is given by Mary Louise Marshall at Tulane University These conferences contain practical information on the selection and care of books and periodicals and serve as a permanent reference for physicians who wish to plan their personal library purchases wisely and economically (26)

Instruction to nonprofessional groups

Medical and allied librarians should also plan instruction for research assistants, undergraduate technicians, secretaries, and various other nonprofessional groups, many of whom are sent by their directors to do the preliminary work necessary for a survey of the literature in a certain subject and to check bibliographic citations. If a general lecture cannot be given to these groups, either separately or collectively the library staff should make sure that each one receives an explanation of the arrangement and content of the library Such instruction imparted when they first come to the library will be invaluable to them and will save much time later on for the library staff

Techniques of public relations

Publicity

Among the important techniques of public relations is publicity which includes all written communications that go out from the library Librar

rians should become proficient in its preparation. The chief purpose of publicity is to promote a realistic knowledge of the library and its good works. This knowledge enables patrons to make better use of the library, administrators and the library committee to understand and sympathize with its problems, the library's own staff to increase interest in their jobs and be inspired to better service, and all, both within and without the organization, to realize its needs and be stimulated to donate money, books and other materials.

Chief among the library's forms of publicity are reports. Every library should make some form of annual report to its patrons. Reports covering a longer period of time—five or ten years—are also most helpful in presenting a comprehensive picture of the library (8). Reports should first be interesting and attractive. Librarians who compile monotonous mimeographed accounts dealing principally with routine will find the reading of a professional textbook (38) on this subject to be profitable. Reports should place emphasis upon the library's special activities, its vital services, and its program for the future. As much money as the budget will allow should be spent on them, for if they are read and assimilated they may bring forth generous support.

Items to be included in reports are: book collection, size and gaps if advisable; use of library: circulation, and attendance; acquisition statistics; cataloging statistics; staff information; budget; equipment added; construction or improvements in building; instruction in the use of the library; special features of administration; special accomplishments in the field of public relations or in cooperative projects; work of special departments; and plans for the future. Some specific suggestions for the preparation of reports are: avoid technical library expressions in favor of a readable style; include illustration (in color if the budget permits); include statistics in graphic form; provide an attractive format and cover. The report, especially one covering a period of years, should if possible be printed. If the library budget will not permit this, the librarian might try to obtain funds elsewhere. The names of the donors of funds for printing the report should occupy a conspicuous place in it. A list of discerning, interested persons to whom the report will be sent should be compiled.

Careful consideration should be given to every written item that goes out from the librarian's office, whether it be a notice for an overdue book, a request to an administrator for an increase in budget, a memorandum giving instruction to the staff, or a letter of thanks to a donor for a valuable gift. In connection with this suggestion, it cannot be too strongly impressed upon librarians that study of the techniques of writing is a necessary part of their education. The following are some suggestions for library communications.

All correspondence should be answered promptly Long delays are inexcusable.

Acknowledgment of gifts should be prompt, appreciative, and should include full information about the gift received. A copy of the acknowledgment, together with a note of thanks, should be sent to any one who may have been instrumental in obtaining the gift.

All communications should be cordial. Terseness and sharpness are unnecessary even when dealing with the most recalcitrant borrower

Letters to administrators should be clear and informative. They should state why a request is being made and how its fulfillment can improve the library Arguments should be presented from the point of view of the administrators, rather than from that of patrons or staff

Communications explaining matters of policy to the library staff and to its clientele should be clear and concise.

Announcements calling attention to a special item of the library's bookstock or service should be timely informative and interesting

Statistics are an important part of library publicity They may give a clear picture of the library's service if they are exact and comprehensive. However they cannot present the entire picture of library service because of the many intangible factors which figures cannot show It behooves a librarian to study thoroughly the techniques of presenting statistics, since their use is fraught with pitfalls. When successfully and vividly presented, as with diagrams or illustrations, they are often a means of calling attention to the library's services and its needs. Librarians preparing statistics will profit by reading the article by Estelle Brodman and associates on basic statistical methods for libraries (3)

Surveys are more often sought by large than by small special libraries, but they can be of real aid to both types of libraries and to the institutions which they serve. A library like any other enterprise, requires periodic checking of its services and facilities for the purpose of measuring efficiency The annual report, while useful for many purposes, may lack the perspective and broadness of view to be expected in a complete survey by expert and impartial observers. A survey may be suggested by the librarian or by the administration, for purposes of analyzing the library's book stock, its services, its policies, or its cost of operation. "While the specific purposes may differ from survey to survey common motives have been found and may be considered from national, regional, university and library points of view " (42, p. 518) It may be made by outside consultants or by the library's own staff Medical school libraries conducting self-surveys may use the Questionnaire for Medical School Libraries prepared by the Committee on Criteria for Medical School Libraries of the Medical Library Association

at all. One should have a clear definition of purpose before starting such an undertaking. A knowledge of the subject is essential and often involves hours of research." (23, p. 24) This advice applies to the elaborate exhibit. It does not apply, however, to bulletin board and other similar types of displays which with the help of modern time-savers like peg-boards and commercial letter sets (see Chapter 8) can be prepared and changed quickly and often (4). Librarians wishing to make the most of their illustrative material would do well to read the advice of Tom Jones, the well-known medical illustrator who advocates planning future medical libraries with plenty of space to display graphic material which has positive educational and cultural value. In the meantime he feels that librarians may use to advantage the bare walls throughout their medical, pharmacy and dental colleges by placing on them appropriate pictures, prints, maps and other pictorial matter which are often obtainable at small cost (19). Illustrative material may be used to foster good public relations by permitting patrons to borrow pictures or portraits to be hung in their homes or offices or to be used in displays prepared by other departments. For the mechanics of exhibits, see Chapter 8.

Motion pictures, radio and television

Motion pictures provide excellent aids for depicting the arrangement and services of a library. Once made, they can be shown over and over to various new groups. An example is the film prepared by Thomas E. Keys and Leonard A. Julin, "The Mayo Clinic Library—An Introduction to Its Use." Films of this type followed by library tours and personal instruction are invaluable aids in teaching the use of the library (70). They can be shown both within the library to resident patrons and outside at the meetings of groups of nonlocal clientele. Short films on certain facilities of the library may be used as a part of recruitment programs for pre-professional medical students.

Radio and television, while vivid means for calling attention to the library, offer more to public libraries than to medical and allied ones. Nevertheless, they have their place in medical organizations. Radio programs supervised by the chief librarian, with patients, guests, speakers, and volunteers participating are listed as useful publicity media by the Veterans Administration (39). With the development of television, similar programs can be televised. Public health libraries and society libraries, especially those which circulate material to a wide group of borrowers, may utilize the methods for radio programs that have been successful at the New York Academy of Medicine and in college libraries (13, 41).

Friends of the Library

A popular method of promoting interest is to organize a Friends of the Library club. A group of people working together can accomplish wonders for the library through its wider contacts it can ask for gifts when a librarian might hesitate to do so. It can help to publicize the needs of the library and to present suggestions by which these needs may best be fulfilled. In small libraries, a library committee may be considered a Friends of the Library group. Acting in an advisory capacity it can be of great assistance to the librarian. As the library grows, this committee may be extended into a regular "Friends" organization. The initiative for forming the organization may be taken by the librarian or by an interested patron. At the time of the organization of the group, the members should be given a clear understanding of what the library is, what it needs, what it wishes to become, and how the "Friends" can help in the attainment of that goal. After this initial stimulation, the librarian should remain in the background, acting only as an adviser. He must, however, keep in constant touch with the group to furnish information about the needs of the library. "Unless this relationship exists, there is the possible danger that the Friends organization may prove an embarrassment to the library by leading to gifts of rare and special collections which are not pertinent to curriculum needs and which result in a heavy administrative expenditure from an already over-taxed budget." (22, p. 493) Medical librarians will do well to interest members of their county and state medical societies, as well as the alumni of their schools, in such an organization. That such effort has produced fine results is stated by Evelyn H. Allen, "Letting the Friends of the Library be your publicity agent is the cheapest and most effective way I know to be truly represented and related to the public." (1)

Teas, open house, lectures

Teas, receptions, open house, lectures, and conferences within the library are attractive means of publicizing the library. Special libraries, particularly, could profit by having a reception or open house once or twice a year. Such an affair permits the showing of new acquisitions, interesting rare books, lovely pictures, or other unusual items in a pleasant social atmosphere. Such an occasion brings the librarian and patrons closer together and helps to make patrons feel that they are an active part of the library.

To encourage interest in the history of medicine, librarians may conduct or sponsor lectures or courses on medical history. Such courses, if well

planned and if kept to a regular time and schedule, are both valuable and interesting Speakers should be chosen with painstaking care, with particular reference both to their knowledge and their ability to present material interestingly Attractive displays may be prepared to accompany these lectures.

Cooperation with affiliated societies and institutions

Librarians should welcome every opportunity to participate in the activities of their institutions or those of affiliated societies. Invitations to lecture to various organizations and their auxiliary associations on the services of the library should be accepted whenever feasible. Securing the help of the wives of professional men often pays dividends, particularly in the obtaining of material that might otherwise be lost to the library Especially is this true if members of auxiliaries are taught to think of the library first whenever they are considering disposing of any of their husbands professional material. Women s auxiliaries are noted for raising money for special projects by means of teas and other social activities.

Memorial gifts

Families sometimes wish to give books or material in memory of some relative. Librarians would be wise to advise their clientele that a gift to the library is a more permanent way to honor the deceased person than is the usual custom of sending flowers. Special gift plates stating the names of the donor and of the person in whose memory it is given can be placed in each book. Special memorial collections, however must be given serious consideration before acceptance, especially if the donors want the collection handled, cataloged and shelved separately Many administrators prefer not to accept collections under these circumstances because of the expense and duplication (see Chapter 5) Often, however if the librarian explains that compliance with restrictive conditions defeats the purpose of the gift, which is to improve the facilities of the library donors will be glad to remove the restrictions. Especially is this true when the donor learns that a small commemorative plaque can be hung in the library and that memorial plates can be placed in each book. Booklets showing donors how gift material is received and processed at the University of Alabama Medical Center Library have been successful in helping convince prospective donors that giving material to the library is the best way of preserving it and of perpetuating the memory of some relative or friend. Each library should make a thorough study of the advantages and disadvantages of special collections and then establish a permanent policy for determining the acceptance of such gifts.

Sponsoring of historical societies

A successful form of public relations for the library is the sponsoring of historical societies. These organizations, through their interest in history and through their wide contacts, often are able to obtain regional material that the library could not otherwise acquire. The librarian may be the guiding spirit in the organizing or the support of such societies and in the planning of their activities, and may cooperate with them by arranging to exhibit at meetings material which the library already possesses or which it borrows for the occasion. Historical societies often become Friends of the Library groups, even though they were not originally organized for this purpose.

Integration with the curriculum

One of the best means by which a school library may promote interest in its material is to integrate the work of the library as closely as possible with the curriculum. This involves cooperation between the librarian and other members of the faculty A librarian should be an ex-officio member of the curriculum committee, so that he may always be aware of new courses and of new work being added in the regular courses.

All these public relations activities are means of promoting interest in the library and are vital library procedures. They all require "blood, sweat and tears, but the results justify the effort. Librarians fortified with education, training, experience and enthusiasm can rise to the challenge and can thereby make their libraries more than mere storehouses for books. There is little reason why a librarian should not work as constantly to make his library active and attractive as does a merchant to make his store appealing or a businessman to make his product successful. The medical library must place emphasis not only on its acquisition, cataloging, circulation and reference, but also on its public relations, so that the other services and facilities may be fully used and appreciated.

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chapter 11

Reference and bibliographic service

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WHAT ARE THE BASIC CHARACTERISTICS of reference work which distinguish it from other forms of library activity? Pierce Butler defines it as follows "In terms of its function it is that process by which civilized man is able to obtain specific information at will by the use of books which have been organized into a library" (6, p. 11) In a medical library the reference service is the heart and soul, not only of the library but in many ways of the whole organization which it serves. The efficiency of this service is the yardstick by which the library s achievement is measured Even a good collection will not be fully utilized unless the library staff is competent to aid readers to glean maximum information from its resources. Readers should be able to obtain not only what they originally sought, but, if desirable, additional information, so that they leave the library with their store of knowledge enriched beyond anticipation. Unless the reference staff carries out its work in this spirit the library is not performing the utmost service that can be rendered. Here, indeed, the librarian s reach should far exceed his grasp, and service should not be limited to the resources of one library the librarian s knowledge of other libraries permits placing additional material from these collections at the disposal of the reader Familiarity with auxiliary reference works is as vital in a small library as in a library with an extensive collection. The personality knowledge, intelligence, and willingness of the reference staff are therefore eminently important in the successful operation of a reference service. If students and scholars have confidence in the staff based on previous experience and pleasant contact, they will continually seek help The personal qualities

enumerated in Chapters 3 and 10 as desirable for staff members are especially pertinent for the reference librarian.

The medical reference librarian should have an intelligent and sympathetic understanding of the scientific attitude and a desire for the accuracy which is necessary in such highly specialized work (8) Also important are a thorough acquaintance with medical terms, a reading knowledge of several modern languages, and familiarity with medical serials and government publications. Some knowledge of the reference resources of other sciences, such as physics, chemistry biology and psychology is also desirable. The library staff should know the collections available locally in public, special, or private libraries, particularly special collections, and union catalogs, and should know which libraries have the more useful nonmedical reference tools, for example, *Readers' Guide World biography* and *Engineering Index*.

Clientele

The medical librarian must learn to know the patrons who make use of the library and must become familiar with the research being carried on by particular groups and individuals. Investigators, students, and busy practitioners have learned to look upon the medical library as a friend in need The physician who wants available literature on a new treatment for a patient with an unusual disease and the surgeon about to perform a difficult operation who seeks to familiarize himself with similar cases turn to the medical librarian for aid and the librarian with enough imagination to grasp the significance of this use of library resources is certain to feel an important participation in the teamwork required for the efficient functioning of modern medicine.

Reference aid in a medical library is needed by patrons who can be roughly grouped into four categories

1. Professionals (a) members of university faculties, scientists and research workers accustomed to doing bibliographic research, (b) those who know scientific literature and its scope thoroughly but who may be unaccustomed to the bibliographic tools, (c) busy practitioners who are often unfamiliar with the literature or tools, but who are faced with the problem of writing a paper or making a case report, and (d) interns, young research workers engaged on their first original problems, and postgraduate students.
2. Semiprofessional and preprofessionals (a) medical and premedical students, (b) student and graduate nurses, (c) dental students, (d) technicians, (e) free-lance bibliographers, (f) ghost writers, and (g) secretaries working for doctors and scientists. Some of the individuals in this group will be comparatively unfamiliar with medical literature or terminology and will frequently need to be shown how to use the reference works.

3. Professional laity: (a) lawyers, (b) industrial and sanitary engineers, (c) reporters, (d) clergymen, and (e) social service workers. Members of this group know little of medical literature or its tools. However they are accustomed to gathering information from various sources, and therefore have the bibliographic approach.
4. Nonprofessional laity: (a) readers sent by physicians with requests for specific books, (b) those who wish to study some particular disease because they themselves or some member of their families are sufferers, (c) the small group of the morbidly curious, (d) the usual casual inquirers who wish addresses of physicians and names of hospitals or institutions, and (e) individuals who are writing papers for presentation before nonprofessional groups.

Some members of each group will usually be found among the readers of any medical library but the proportion of each group will vary with the type of institution. For instance, the medical society library open to the public will draw more of the nonprofessional laity than the university medical library whose clientele is composed chiefly of professional and semiprofessional individuals, and the small hospital library might be largely used by practitioners and interns.

Scope and organization of reference service

The extent of the reference aid which can be given depends upon the size and nature of the library and its staff In the small library it is necessary for the medical librarian to combine reference work with other duties. Many libraries cannot afford a full-time reference librarian, and all of the professional staff must at times, function in that capacity Only the largest libraries maintain reference departments. Although the proportion of the time available for reference work varies, in a good medical library a large share of the professional staff's time should be devoted to it Cooperation among staff members in the division of work is important the librarian must at times sacrifice the pleasure of giving reference aid if from the standpoint of expediency some other member of the staff should handle the question It is well to keep statistics on the number and types of questions handled and the time involved

Lyle in his chapter on reference work in the college library (6, p. 81–102) and Halvorson, discussing reference service in the university and research library (6, p. 103–23) stress the instructional aspect of reference work and feel that teaching the use of the library is one of the most important functions of the reference staff This aspect of reference service is discussed in Chapter 10, but it should be noted here that the type of instruction and aid given will of necessity vary In a medical school library

it is important to teach students how to help themselves—even though it might be quicker in specific cases for the librarian to find the material for them—because such training is an important part of the student's medical education. Reference service for the teaching and research faculty consists largely in tracking down difficult references and assembling bibliographies on request. Busy physicians will need more aid than the investigators who prefer to do their own searching. It should be emphasized however that the librarian has a definite responsibility to see that all readers are familiar with the modern indexes, abstracting services, and review journals which form the connecting link between the larger collection and the small library which must augment its resources by means of interlibrary loans and photographic services.

Interlibrary loans and photoduplication

Interlibrary loans constitute one of the most important services libraries can give to research, but they are very expensive, both for the lending and for the borrowing library. J. G. Hodgson and Mary Lou Lucy reported on costs to a symposium organized in 1952 by the Committee on Interlibrary Loans of the Association of College and Reference Libraries (23). While more study will be needed before conclusions can be drawn, it seems evident that lending costs average about $1.25 to $1.50 per item, based on book-post rates, not express charges. Bibliographic errors increase costs substantially for the lending library: the increase may be from 38 to 62 per cent, depending on whether skilled personnel is employed to verify references. J. G. Hodgson and R. W. Kidder pointed out during the symposium (23, p. 337) that because of the lack of proper bibliographic tools in the small libraries, the large lending libraries must assume much of the burden of verification. The small library can do much to decrease costs if requests are checked as carefully as resources permit. The General Interlibrary Loan Code, 1952 (16), appended in full to the symposium, was accepted by the Council of the American Library Association in July 1952, replacing the earlier codes adopted by the Association in 1917 and 1940. A full description is also given of the Loan Request Form, a multiple carbon copy unit which saves labor, increases accuracy, and eliminates many unnecessary steps for both the borrowing and lending libraries. A useful list of national and international bibliographic centers and union catalogs is included. Reprints of the code may be obtained from Gaylord Brothers, Syracuse, New York, for a nominal sum.

A panel discussion on medical interlibrary loans which took place during the 1946 annual meeting of the Medical Library Association (34) indicated some of the difficulties encountered by both borrowing and lend-

ing medical libraries and led to the formulation of a code which the Association adopted in 1948. This code can be found in the Medical Library Association Directory (no. 1143)

Requests should be made in a uniform manner and all references carefully checked against a reliable index or abstracting source for verification of bibliographic data. Additional correspondence is saved if the original request states whether a film or photostat will be acceptable, and it is helpful if the envelope is marked "Interlibrary Loan." The borrowing library should pay all transportation costs and, in returning insure the package for the full value indicated by the lending library Convenient insurance coupons are available for this purpose from fire and theft insurance agencies. In order to distribute the burden for lending libraries more equitably and decrease the expense for the borrower it is recommended that libraries borrow within their own geographic region as much as possible. In order to do this the librarian must know where to obtain desired material. The following are useful guides for locating periodicals

American Chemical Society "Periodicals abstracted," Chemical Abstracts, *45* (1951) (no. 837) Also published separately

American Medical Association, "List of medical journals abstracted." This precedes the subject index of each volume of the Association *Journal*. The list of periodicals indexed which appears at the front of each volume of the *Quarterly Cumulative Index Medicus* should also be consulted. Even these lists will not give a complete indication of material available at the Association library since between 1,600 and 1,700 titles are on file. Issues for the last eleven years can be borrowed by physicians on direct application to the Association's library 535 North Dearborn Street, Chicago 10 Illinois. This is a helpful service, since many libraries will not lend material for the current year or any unbound material.

Current List of Medical Literature (no. 103) Items listed are available from the Armed Forces Medical Library after the current year but microfilms or photoprints are furnished at cost at any time.

New Serial Titles (no. 18)

Special Libraries Association, Union list of periodicals in pharmaceutical libraries (no. 1404)

Special Libraries Association, Union list of technical periodicals, 3. ed., 1947 (no. 21)

Union list of serials in libraries of the United States and Canada with its Supplements 1 and 2 (no. 22) This is the best source.

U S. Veterans Administration, Union list of serials (no. 157)

Vital Notes on Medical Periodicals (no. 158)

World list of scientific periodicals (no. 25)

Useful guides for locating books are

Index-Catalogue of the Library of the Surgeon General' Office (no. 104)

Special library resources (no. 1144)

U. S. Armed Forces Medical Library catalog (no. 102)

U S. Library of Congress, Catalog of books.

After checking the above sources it is still sometimes necessary to write to several libraries before a given title can be obtained. As a last resort, inquiry can be made of the National Union Catalog at the Library of Congress, which records holdings for both books and periodicals and will circularize libraries throughout the country for rare unrecorded publica-

Numbers in parentheses preceded by no. refer to items in the Bibliography at the end of this *Handbook*.

tions. Small libraries should ask to be placed on mailing lists to receive acquisition lists from large libraries.

It is the policy of many libraries not to subject certain volumes to the wear and tear of transit. It is impossible to obtain such material unless a photoprint or microfilm is acceptable. Unfortunately since this type of service is not so prompt as interlibrary loan service, there is often a delay of three to four weeks or even longer Photoduplication services are discussed in Chapter 9

Arrangement of materials to facilitate reference service

The arrangement of the collection is important. Patrons can be made comfortable while using reference works. Frequently consulted indexes and abstract services consisting of many volumes should be conveniently located on shelves near tables so that the reader can reach them easily In many cases tables can be specially adapted to hold sets of reference books. Related types of reference works can be grouped biographic encyclopedias and directories together historical books together and so on. If the library is small and has a limited staff, the arrangement should be carefully studied, not only for the patron's comfort but also for efficiency and rapidity of service. It is important to have a good collection of directories and books for ready reference, especially those containing statistical information, near the telephone and the librarian's desk. A well-organized catalog is essential and should be as close to the telephone as circumstances permit. Because of the great importance of serials in medicine, the catalog should include an alphabetic "short form card index of the library's serial holdings, arranged by title and kept separate from the book portion of the catalog Such an index is an invaluable reference and well worth the time and trouble needed to establish it.

All manuscript translations which find their way to the library should be filed by author or subject, with an author index which will show the original and translated titles, date and paging of the original publication, name of translator and date of translation. Notes on published translations may also be recorded here. Collections of translations of medical literature are maintained by the Translation Unit of the Library of the National Institutes of Health, the Library of the New York Academy of Medicine, and by the Armed Forces Medical Library The National Science Foundation has established a Scientific Translations Center at the Library of Congress which stresses information on available translations of recent scientific literature, including Russian lists are sent on request. Catherine Kennedy describes the translation service of the Mayo Clinic Library (27) A card index of information regarding local translators, indicating lan

guages handled, charges, addresses, and phone numbers, is very helpful. Information regarding out-of-town services offered by large libraries or private concerns should also be filed.

Medical reference works

The prime tools of the reference librarian are of course the reference books themselves. Fortunately medicine is a well documented science, as evidenced by the Bibliography at the end of this *Handbook*. For the benefit of the small library some of the most useful reference works have been starred in the Bibliography; however, it is well to outline briefly the types available and indicate some of their reference functions here. A few practical illustrations are also given on how they may be used.

Two developments important to the evolution of scientific literature were the introduction of printing and the rise of the scientific society. Some of the earliest periodicals were really proceedings or transactions of the meetings of these societies, thus inaugurating the practice of publishing scientific facts and discoveries in periodicals rather than in books which persists to the present time. The need to document and record scientific publications developed early. A detailed account is available in Estelle Brodman's *The development of medical bibliography* (no. 167) which includes a comprehensive list of early bibliographies. Other extensive studies are by John F. Fulton (no. 168), Lucien Hahn (no. 173), John L. Thornton (no. 169), and Henry R. Viets (no. 170).

The first printed medical bibliography, *De medicinae claris scriptoribus*, was compiled by Symphorien Champier and published in Lyons, 1506. Various bibliographies from the seventeenth century have come down to us, but it was not until the last half of the eighteenth century that medical bibliography really came of age. The works of Albrecht von Haller (no. 174, 637, 799, 1785) appeared from 1771 to 1778. Wilhelm Gottfried Ploucquet published his *Initia bibliothecae medico-practicae* (no. 179) and its supplements from 1793 to 1813, and in the first half of the nineteenth century Johann Ludwig Choulant issued his historical bibliographies (no. 171). In 1830 a Danish army surgeon, Adolph Carol Peter Callisen, issued the *Medicinisches Schriftsteller-Lexicon* (no. 88), which appeared in 33 volumes, 1830-43. Fielding H. Garrison (no. 311) cites this production as "one of the most wonderful things ever achieved by a single man." While the vast majority of the 99,000 items listed by Callisen are books, three volumes are devoted to the articles contained in medical journals.

From 1845 to 1879 no comprehensive bibliography of medical literature

Haller has been the subject of several interesting biographic sketches, among them Klotz (29) and Fulton (13).

was published. The gap was partially filled by the annual German abstract journals, *Schmidt's Jahrbücher der in- und ausländischen gesammten Medicin* 1834–1922 (no. 101) Canstatt's *Jahresbericht* 1841–65 (no. 89) and its successor *Jahresbericht über die Leistungen und Fortschritte in der gesammten Medicin* 1866–1916 (no. 96) The classified arrangement and inadequate indexes of these works make them difficult to consult rapidly and the bibliographic citations in the early volumes are not always complete, but they represent almost the only extensive sources for the clinical literature of their period

At the close of the United States Civil War the Library of the Surgeon General's Office in Washington was being reorganized and the collection built up by an army surgeon, John Shaw Billings, who was also a master bibliographer His dynamic personality his original ideas, his genius for recognizing ability in younger men, and his grasp of the problems of medical education made him not only the foremost medical librarian in America but also one of the most important medical men of the century and his influence on the development of modern medical education and public health has been tremendous. For interesting biographies see Garrison (14) H. M. Lydenberg (33) and the Billings Issue of the *Johns Hopkins Hospital Bulletin* (25)

Billings (1a) saw at once that a record of the contents of the marvelous medical collection he was assembling should be made accessible to scientists and the *Index-Catalogue of the Library of the Surgeon-General's Office* (no. 104) was the result its story is told by Harold W Jones (26) Billings also realized that a subject catalog of this type would not fill all the bibliographic needs of the medical profession and that an annual publication would be required. He therefore established, with the aid of Robert Fletcher the *Index Medicus* (no. 92) which appeared from 1879 to 1899 and from 1903 to 1927 Garrison became an editor in 1903. The gap for the period 1899–1902 was most inadequately filled by the *Bibliographia Medica* (no. 85) and the *Index Medicus Novus* (no. 93)

In 1916 the American Medical Association started the *Quarterly Cumulative Index* (no. 99) an index which differed from the *Index Medicus* in that it was arranged alphabetically by authors and subjects and not by a classified arrangement. It covered only 157 journals, most of them clinical, and did not index all of these completely the *Index Medicus* was much more comprehensive. Both indexes were published at a financial loss. The Carnegie Institution of Washington subsidized the *Index Medicus* The American Medical Association subsidized the *Quarterly Cumulative Index* and this *Index* gradually increased its scope until it duplicated most of the *Index Medicus* entries. The logical solution seemed to be an

amalgamation, which was effected in 1927 using the modern format of the *Quarterly Cumulative Index* which began a new series in that year and added "Medicus" to its title. Garrison discusses this union (15) From 1927 to 1940 this index constituted an efficient, easily used bibliographic tool. During World War II its publication was increasingly delayed to the point that it appeared only semi-annually It has still not resumed its former schedule, and the volumes appear two years after the publications recorded in them.

In order to bring news of the medical literature rapidly to the attention of the profession a group of scientists formed the Friends of the Army Medical Library and, under the stimulation of Atherton Seidell, issued the *Current List of Medical Literature* (no. 103) a processed, pocket-sized, weekly publication giving the contents of medical journals arranged by broad subject classification Designed at first as an adjunct to the Army Medical Library's Medicofilm Service for temporary use as a reference tool until the *Quarterly Cumulative Index Medicus* appeared it was taken over by the Armed Forces Medical Library in 1945 It has since undergone many changes in format and scope, the result of which has been a steady improvement in the *Current List* It is the only index which at present warrants the designation "current."

Since the days of Billings the volume of medical literature has been increasing steadily and it is evident that the bibliographic methods used then are no longer adequate. Billings estimated that over 20,000 articles appeared in the medical journals of 1879 Some of the increases in volume since that time are outlined in an editorial, "Medical Literature and Medical Libraries." (35) Up to 1893 about 7,000 books and articles on syphilis had appeared from 1893 to 1912 there were 14,000 and from 1913 to 1932 another 21,000 Vitamins began to appear in the literature in 1914, and by 1932 over 1,000 articles had appeared Obviously the need for good bibliographic tools is greater than ever The medical librarian is handicapped because two medical indexes, one of which is delayed in publication, must be searched. The two cover approximately 2,500 periodicals, but only a portion appear in both. Abstracting services must be used to supplement the indexes. The time and expense of duplicate searching could be avoided by the publication of a single, comprehensive index which would appear promptly

After a careful evaluation of the situation, the Armed Forces Medical Library felt it was no longer justified in continuing the publication of the *Index-Catalogue* which therefore ceases with the appearance of the "M Mn volumes of the fourth series and five projected volumes listing the monographic literature up to 1950 by author and subject. Some of the

problems faced by the Library in publishing the *Index-Catalogue* have been outlined by Frank B. Rogers and Scott Adams (42) and by Estelle Brodman (3) In 1948 the Surgeon General appointed an advisory Committee of Consultants for the Study of the Indexes to Medical Literature Published by the Army Medical Library A final summary report of the Committee's activities has appeared (7)

A study of the reports of the Royal Society Scientific Information Conference (43) and of those reporting a series of conferences sponsored by UNESCO (53-55) makes it clear that reforms are needed to enable bibliographic tools to handle competently the increasing volume of mid-twentieth-century literature. These international conferences have had both tangible and intangible results. By making the world more conscious of the need for the production of national bibliographies they have stimulated the formation of national committees and publications of various kinds national bibliographies, national and international lists of periodicals—e.g *World medical periodicals* (no. 161)—and other tools, such as new scientific and medical dictionaries. In addition to the official reports, many analyses of the situation have been published both by groups and individuals (4 4a, 9 10 12, 46, 56, 57) UNESCO has shown continued interest in the problem and its Advisory Committee on Documentation in the Natural Sciences issues a *Monthly Circular* (Paris, no. 1, May 1952+) for distribution to members of UNESCO committees and collaborating bodies concerned with documentation. The UNESCO Libraries Division issues a *Bibliographical Newsletter* 1952+ and has set up an International Advisory Committee on Bibliography Some of the projects formerly stimulated by the UNESCO Coordinating Committee on Abstracting and Indexing in the Medical and Biological Sciences (dissolved in 1951) have been taken over by the Council of International Organizations of the Medical Sciences and by the World Health Organization.

Recently many discussions of modern scientific approaches to "literature search and the application of machine methods to bibliographic problems have appeared in the literature (1, 1b, 5 18, 22, 40b, 41 44 45, 50, 60) Studies have been sponsored by the American Institute of Physics, Dwight E. Gray (17) Robert S. Bray (2) and Gray and Bray (no. 1459) and by the project on medical indexing set up for the Armed Forces Medical Library at the Welch Medical Library of Johns Hopkins University reported by Sanford V Larkey (17a, 30-32)

Bibliographic processes in medicine and science are in a state of flux that is reflected in the frequent changes undergone by the bibliographic tools themselves. This means that the medical librarian must make every effort to keep abreast of new developments, to watch for new tools and

for changes in familiar tools, and to keep the library staff instructed regarding these changes.

Medical bibliographies

Since the greater part of medical literature is published in periodicals rather than in books, the bibliographies which form the key to the use of this literature are tremendously important. They can be grouped into four general types—indexes, abstract journals, review journals or year books, and bibliographies on a particular subject which cover a specific period with no continuation at regular intervals. Extensive lists of bibliographies can be found in the various volumes of the *Index-Catalogue of the Library of the Surgeon-General's Office* Besterman's *World bibliography* and this *Handbook's* Bibliography Columbia University's *Guide to the literature of the medical sciences* (no. 79) L. T Morton's *How to use a medical library* (36) and other lists mentioned in the Bibliography (no. 79–166) give helpful information for the average and small library

Indexes abstract and review journals

Indexes and abstract journals are probably the most useful of the bibliographies. They are considered together because in some subjects abstract journals function as indexes, and even when separate indexes are available the abstract journals are constantly used to augment them. The *Quarterly Cumulative Index Medicus* (no. 99) and the *Current List of Medical Literature* (no. 103) are the most important and useful current international bibliographies of medicine and the allied sciences. The *Index Medicus* (no. 92) is an annual index which covers the periods from 1879 to 1899 and 1903 to 1926. The *Index-Catalogue* (no 104) is a subject and author index published in four series covering both books and articles in periodicals. By using the pertinent volumes from each series a background can be obtained for any subject from the earliest times up to the approximate date of the latest volume covering the subject. This splendid tool is difficult to use in order to obtain the wealth of information it contains the librarian should study carefully the detailed annotation in the entry for the *Index-Catalogue* (no. 104) Its chief value in a search of periodical literature is to provide a subject approach few author entries are made for periodical articles and it is difficult and time consuming to search under all the possible subjects to find just where a given author's article appears. Books and monographs are listed under the author's name and also under subjects, but occasionally some subject entries fail to appear under the author's name in later volumes. It is therefore sometimes difficult to trace works of an author completely or to cover any specific subject

thoroughly For this purpose the *Index Medicus* the *Quarterly Cumulative Index Medicus* the *Armed Forces Medical Library catalog*, and the *Current List* should also be searched. Entries which had been prepared for future volumes of the *Index-Catalogue* and were never printed cover material published subsequent to the last volume issued for any part of the alphabet down to April, 1950, and are available for consultation in the Armed Forces Medical Library Microfilm or photoprints of the cards for any subject may be obtained at cost from the Library

Abstract journals vary in character some are highly selective and others comprehensive. They publish brief, usually informative condensations, from a paragraph to a page in length. Such publications are extremely useful to those who do not know foreign languages, to scientists working far from library centers, and to small libraries which have only a limited number of periodicals, since they help readers to decide whether it is necessary to get the original articles by interlibrary loan or photocopy More than 200 medical journals have significant abstract sections. A list of 179 selected current services can be found in the list of those available in the World Health Organization Library (no. 159) Other sources for such services are the *Index bibliographicus* (see page 349) and a classified record made by the International Federation for Documentation (24) which includes journals with abstract sections as well as separate services. The most comprehensive medical abstracting service in English is *Excerpta Medica* (no 90) Published in 17 sections, it includes all the medical specialties. The various German and Swiss "Zentralblatter and "Berichte have good abstracts, and, with other foreign services, are listed in the Bibliography *Abstracts of World Medicine* (no. 82) published since 1946 by the British Medical Association, is an example of a selective service publishing critical abstracts. Also important are *British Abstracts of Medical Sciences* (no. 87) *Chemical Abstracts* (no. 837) and *Biological Abstracts* (no. 768)

New developments in various subjects are covered by articles in reviews and yearbooks which usually include good bibliographies. *Medicine* (no. 141) *Physiological Reviews* (no. 1469) and the *Year Books of Practical Medicine* (no. 143) are good examples of works of this type in English. Recently a number of publications which cover periods of from one to five years have begun to appear for instance the "Advances in" and "Progress in" series and Annual Reviews," which make it possible to obtain a background on subjects of current interest rapidly To a large extent they have replaced for the English speaking reader the German review journals, the "Ergebnisse." However the latter contain lengthy scholarly reviews and splendid bibliographies which cover the foreign literature

more comprehensively than the "Advances in" type of review Before 1940 they were the only review journals available in some subjects.

Since the natural sciences are closely connected with medicine, it is frequently necessary to turn to bibliographies in these fields. This was pointed out by Janet Doe (11) Columbia University's *Guide to the literature of science* (no. 4) is helpful in this regard, as are Harold Oatfield's papers, "Literature of the Chemical Periphery" (37-40) Guides to the literature of various allied subject fields are also important. Examples are those of Melvin G Mellon (no. 844) George M. Dyson (no. 839) Byron A. Soule (no. 848) Roger C. Smith (no. 1958) National League of Nursing Education (no. 1220-21) and Charlotte Kenton (28)

Bibliographies of periodicals

Bibliographies of periodicals are useful for the accurate cataloging of serials, for verifying references, and for information on title changes and mergers. The usual sources consulted are the lists appearing in the *Index Catalogue* the *Current List* and the *Quarterly Cumulative Index Medicus* The recently published UNESCO/WHO *World medical periodicals* (no. 161) is one of the few lists to include a geographic and subject index and to indicate which of the major abstracting services covers a given periodical. The Medical Library Association's *Vital Notes on Medical Periodicals* (no. 158) gives current data concerning new journals and the mergers, re appearance or discontinuation of medical periodicals *Periodica medica* (no 152) issued in Germany is comprehensive but only lists titles. Each May issue of *Biological Abstracts* (no. 768) contains a list of journals abstracted. Reprints are obtainable from the editor Certain other lists of nonmedical periodicals are useful for data about scientific publications not included in medical lists and are usually available in the local university or public library It is desirable for the medical reference librarian to be familiar with their arrangement and scope.

One of the most important contributions of modern librarianship has been the development of union lists of serials. Only those who have assisted in their preparation are fully aware of the patience and unselfish effort required of the library staffs who cooperate in their compilation. A comprehensive bibliography of union lists is to be found appended to the *Union list of serials* (no. 22) The *Union list* itself is an invaluable tool for every type of library but unfortunately it is so expensive that many libraries cannot afford it. Supplements bring its coverage to 1949 but there will be no third edition because of the prohibitive cost of production. *New Serial Titles* (no. 18) issued monthly by the Library of Congress, serves to supplement the *Union list of serials* by listing reports of new serials not

already cited in published union lists. As a last resort, requests for information about hard-to-locate titles can be addressed to the Library of Congress Union Catalog Division. For a detailed discussion of how to locate material, see pages 268–69

Preparation of bibliographies of the publications of national and international conferences and congresses has always presented difficulties. Such proceedings are issued very irregularly in varying forms, and under different titles, sometimes as separate publications and at others in various journals. This makes it necessary in listing them to give very detailed entries the simple, standardized form employed for other serials does not suffice. Another difficulty is the problem of access to the original. Comparatively few libraries have complete collections of them and, even when the collections are available, the proceedings are hard to find unless some painstaking cataloger has charted the records of each. Perhaps these difficulties account for the fact that there are so few lists of this type. Among the few published sources are Gregory's *International Congresses* (no. 164) "Congresses List of National and International Meetings in the *Index-Catalogue* (no. 104) series 4, volume 3 the lists in the *World list of scientific periodicals* (no 25) and H. Stumke s *Bibliographie der internationalen medizinischen Kongresse* (no. 166)

Obtaining information concerning scheduled international conferences has always been a time-consuming task. The recently issued U S National Science Foundation s *List of International and Foreign Scientific Meetings* (see page 371) has proved helpful in this regard. The *Bulletin of the Council of International Organizations of Medical Sciences* (no. 163) also includes a calendar of such events. Medical libraries should have these lists, which are usually sent free. The *Journal of the American Medical Association* and the *Presse Médicale* have good lists of current international and national conferences and meetings. For additional publications of the same type see page 371 of this *Handbook*

Documents

A wealth of statistical reports of medical interest, particularly in the fields of public health, medical economics, and food and drug legislation, can be found in government documents. Unless the medical librarian is sufficiently familiar with the bibliographies which constitute the key to these documents, it is often difficult to locate the material desired. Unfortunately no complete list of medical government documents has ever been compiled, and for this reason check lists which may contain only a few items of medical significance are important.

Check lists of League of Nations and United Nations documents can

be found in the Bibliography The *International Reporter* (New York Columbia Univ Pr., International Documents Service, 1937+) is sent free and with other check lists and pamphlets, itemizes the publications of the World Health Organization, Food and Agriculture Organization and United Nations Educational, Scientific and Cultural Organization. It is important to check these lists regularly Vital statistics have world-wide significance they usually appear in government publications (see no. 1751–70)

Helpful guides to the use of United States federal documents are listed in the Bibliography Two bibliographies mentioned there, the United States Documents Office *Monthly Catalog* and the Library of Congress *Monthly Checklist of State Publications* are extremely useful to medical libraries. It is necessary to check each issue promptly since the material listed tends to go out of print quickly When information concerning the publications of a given federal bureau or department is desired, various price lists are exceedingly helpful, such as the Documents Office s "Health, Hygiene, Drugs, and Sanitation," (no. 78) and "Diseases" (no. 77) From time to time various public health services are described in pamphlets issued by the Public Health Service, such as its "National Institutes of Health 1951 (its Publication no. 81) The development of the departments of importance to health are covered in detail in the monographs which were issued by the Institute for Government Research (20, 51 52, 58, 59) The most important for medical libraries is that on the activities of the Public Health Service by Laurence F Schmeckebier (no. 1603) which also includes information concerning other subsidiary institutes such as the Hygienic Laboratory (since 1930 the National Institute[s] of Health) No check list of the various publications is included, though their history is outlined, but a valuable bibliography of literature dealing with the development of public health in this country is to be found on pages 273–92. Unfortunately this book is now out of print, and a more recent one by R. C. Williams (no 1605) does not entirely replace it.

Few comprehensive bibliographies of the documents of other countries exist. One of the best sources is still Gregory s *List of serial publications of foreign governments* 1932. Childs *Government document bibliography* published by the Library of Congress, is a concise pamphlet which lists the indexes and guides to the documents of each country

Medical biographies

Among the most useful reference books in a medical collection are the biographic dictionaries and directories, an extensive list of which will be found in the Bibliography These works are useful to both staff and readers

and should include as wide a range of countries and subjects as possible. A useful article listing biographic sources is Erna Russo's "Establishing Personal Author Entries in a Medical Library" (no. 219). Garrison's "Available Sources and Future Prospects of Medical Biography" (no. 218) still represents one of the best guides. In addition to its literary and historical significance, it is helpful as a practical outline of the procedures involved in establishing biographic and bibliographic data concerning medical persons. The intimate relationship between medical history and medical biography is discussed in Chapter 12. Garrison's *Introduction to the history of medicine* (no. 311) is packed with biographic facts and has an excellent personal name index. The standard medical dictionaries are helpful, particularly for data concerning persons whose names are associated with diseases, treatments, organs of the body or instruments, and Kelly's *Encyclopedia of medical sources* (no. 175) is also useful for this type of information.

Extensive general works such as the *Dictionary of American biography* the *National cyclopaedia of American biography* and *World biography* are adequately discussed by Winchell, and their medical application is noted in the Garrison article (no. 218). Some of them are among the best sources for data concerning medical scientists and physicians, e.g. *American men of science* and the national and regional "Who's Who" type of directory. The Marquis Company publishes useful regional volumes as companion works to *Who's who in America* which include many important persons selected by the same methods as those in the basic volume but not to be found there. Unfortunately the medical biographic directories of this type which have been published in the United States, for instance *Who's important in medicine* (no. 225) are not as adequate. For information concerning famous foreign physicians the *Biographisches Lexikon* (no. 220) and its continuation (no. 221) are still among the best sources, and for contemporary foreign physicians almost all countries have the "Who's Who" type of directory, e.g. *Who's who 1953*, *Wer ist Wer? 1951*, *Chi è 1948*, *Vem är Det 1953*, *Who's who in Switzerland 1952*, *Who's Who in Latin America* and UNESCO's *Scientific institutions and scientists in Latin America* (no. 65).

Lists of biographic articles and obituaries appearing in periodicals through 1946 can be found under "Biographies" and "Obituaries" in the *Quarterly Cumulative Index Medicus* (no. 99) as well as under the surname of the individual; after 1946 they appear under "Obituaries" and the individual's name only. In the *Current List of Medical Literature* (no. 103) such articles are indexed under the surname of the biographee in the subject index. In the *Index-Catalogue* (no. 104) they are listed under the surname of the individual. The lists under "Biographies" to be found

in the cumulative subject indexes to *Chemical Abstracts* (no. 837) the "Biography History" section of *Biological Abstracts* (no. 768) and those published by the National Academy of Sciences (no. 37) are also helpful.

To obtain information concerning the less famous individuals of any country many sources must be used. Obituary notices and news notes in many journals should be consulted for example, the *Journal of the American Medical Association* the *British Medical Journal* the *Lancet* the various "Wochenschriften," and state and local journals of all kinds, some of which are usually available in small as well as large libraries. The many biographic dictionaries dealing with restricted localities, such as states, cities, and counties, should also be searched Histories of medical societies, medical schools, and hospitals frequently provide a great deal of biographic data concerning members, officers, and the faculty

Biographic directories and lists of physicians

Biographic directories and lists of physicians fall roughly into two categories the general type, consisting of national lists of registered physicians, for example, the American Medical Association's *Directory* (no. 278) and lists of specialists, such as the *Directory of medical specialists* (no. 281) Membership rosters of societies are often published in the journals of state medical societies and in society yearbooks. A check of recent periodical articles by a given author will often yield his latest address. Some directories of physicians are limited to lists of names and addresses but others contain much biographic information and have therefore been included in the Bibliography under "Biographies."

A comprehensive list of directories of physicians in foreign countries has been compiled by Irene Strieby (47) This list has not been revised since 1940 but the Office of International Trade of the Bureau of Foreign and Domestic Commerce frequently issues revised mimeographed lists of physicians, surgeons, and dentists for the majority of countries at a price of one dollar per list. Names are arranged under the city or town and in the longer lists are also classified by specialties.

Encyclopedias, handbook guides

Encyclopedias, handbooks, and guides are discussed in the Preface to the Bibliography and will be found listed under subject sections in the Bibliography These reference works do not follow a uniform pattern. Some are extensive works of many volumes by many contributors, others are compact treatises, but all have one characteristic in common—

reference value. They frequently contain bibliographies and are well indexed. The extensive systems, whether they cover a whole subject field or one specific topic, are either loose leaf or are kept up to date by supplementary volumes. Tice's *Practice of medicine* (no. 518) is an example of the loose leaf form the *Cyclopedia of medicine and surgery* (no. 509) illustrates the type kept up to date by supplements. The principal advantage of the loose-leaf form is that it permits continuous revision without new editions. Each system has certain advantages and disadvantages in arrangement. A library not able to afford all of them must make a selection based on the individual preference of its clientele. Many of the German "Handbucher" even those which have not been revised for a considerable time, have reference value because of their unequaled illustrations, good bibliographies, and painstaking and detailed descriptions.

Directories

Directories list individuals, societies, philanthropic organizations, schools and colleges, hospitals, clinics and other health services. A library can hardly have too many directories, but they are constantly being revised and are therefore expensive to maintain. The biographic application of directories has been discussed, but many combine this feature with other information such works as the American Medical Association's *Directory* (no. 278) the *Medical Directory* (no 257) and the *Medical register* (no. 258) include far more than addresses and biographic data. Publications of this kind often contain useful lists, such as regulations and laws important to health and the practice of medicine. It is surprising what the well-trained librarian can extract from a few such tools, and this ability is vital to the small library where the collection is limited. The annotations to the directories listed in the Bibliography give further details. Lists of medical schools can be found in these works, in the Educational Number of the American Medical Association *Journal* (no. 523) and in the World Health Organization's *Directory* (no. 527) For other directories of schools the Bibliography should be consulted. Many societies publish directories. The list compiled by Strieby and Pond (49) while not revised recently still contains useful information, and the lists of physicians already mentioned, issued by the Bureau of Foreign and Domestic Commerce, serve to supplement it.

Dictionaries, studies of terminology vocabularies

Dictionaries form an important part of the library equipment and do not go out of date rapidly The use made of them varies with the type and

size of the library and with the character of the clientele, but even a small library *should* have a well-chosen collection.

No general language dictionaries, either in English or in foreign languages, have been included in the Bibliography. For these Winchell's *Guide* or the Library of Congress *Foreign language—English dictionaries* should be consulted. A good source for technical dictionaries is Holmstrom's *Bibliography*. Many types of medical dictionaries in both English and foreign languages have been included in the Bibliography. This comprehensive section includes not only dictionaries but also grammars with very extensive vocabularies, phrase lists, and glossaries, which meet certain needs more adequately than an ordinary dictionary. A few esoteric specialized types have also been listed because they often include information regarding history, local usages, manners, customs, and folk lore.

It has been said that the medical student must master scientific terms equivalent to another language, and this is equally true for the medical librarian. Therefore works which stress the derivation of medical terms are very helpful. With the increasing use of abbreviations in all languages, dictionaries of abbreviations are especially valuable. Peyser's *Pars pro toto* (no. 537) is the only medical work of this type available. A few examples of other types have therefore been given and Winchell lists many more. The most comprehensive medical dictionaries in English are the American works, such as Dorland (no. 540), Blakiston (no. 538), and Stedman (no. 542). To some extent they supplement each other and it is a good plan to buy the new editions in rotation so that as many as possible will be available in recent revisions.

Medical dictionaries for foreign languages are of three main types, the polyglot, the bilingual, and the standard dictionaries in one language. For English-speaking readers it is important to use a work in which entries under the foreign language are adequate; dictionaries vary greatly in this respect. Several recent polyglot dictionaries, for instance Clairville (no. 546), utilize new methods of integration of language similar in principle to that outlined in Annex D of Holmstrom (19). While multilingual dictionaries (no. 544-55) are usually not so comprehensive as the bilingual, they can be very useful to small libraries whose funds are limited. Many excellent new bilingual dictionaries have appeared in recent years (no. 556-615). A medical library can hardly have too many. The standard foreign medical dictionaries are similar in function and arrangement to such works as Dorland (no. 540) but are often not so comprehensive. They include different special features, depending on the customs and needs

of the readers for whom they are designed. Even without English equivalents their definitions are helpful in clearing up obscure terms. For convenience they have been grouped with the bilingual dictionaries in the Bibliography

Answering reference questions

The types of questions encountered in a medical library are reviewed in this section, and practical illustrations are given of the utilization of some of the tools already described.

In any kind of reference work the importance of obtaining a clear picture of just what the patron wants cannot be too strongly emphasized. This is well outlined by R. H. Hopp (21) Busy physicians are often vague in outlining their requests, and the multiplicity of synonymous terms in medicine is confusing even to the experienced bibliographer Much subsequent difficulty can be avoided if the following information is invariably obtained at the time of accepting a reference assignment

A specific statement regarding the particular aspect wanted etiology treatment, surgical aspects, legal aspects, or historical data. It is essential to establish also the various terms under which the subject might be found.

The purpose for which the material is intended preparation of an essay monograph, case report, scientific paper student lecture, staff meeting, scholarly address, radio address, popular address, preparation of slides or exhibits, or for information on the treatment of patients.

The amount and type of material needed years to be covered whether an exhaustive or selective survey of literature is needed whether certain authors or journals are to be covered whether articles in foreign languages are to be included, and, if so, which languages.

Additional information the address and telephone number of the reader and the exact time when the work must be completed whether the volumes are to be made ready for use or the list of references will be sufficient; whether material not available in the library is to be requested on interlibrary loan or as photo-reproduction, in which case the client should be informed of the library's rules on transportation charges for loans and the probable cost of making films or photostats.

The illustrations on page 284 show suggested forms to be filled out when a reference assignment is accepted and for a bibliographic work slip.

Reader's name ______________________________
Address ______________________ Telephone No. ________
Date request taken ____________ Date material wanted ____________
Purpose (e.g. speech or paper for professional group ______ for lay group ______
clinical use ______ experimental research ______)
Subject: (Unnecessary labor is saved if details are obtained from reader. Ask for synonyms and the exact aspect wanted. Try to have reader look up subject with librarian in a volume of the *Q.C.I.M.* or the *Current List* before beginning search.) ______________________________
____
Years to cover in search ______________________________
Foreign languages to be included ______________________________
Is search to be exhaustive (Yes ___ No ___) or selective? (Yes ___ No ___)
Should references include material not in Library's holdings? (Yes ___ No ___)
Sources already covered by reader ______________________________
Sources for search suggested by reader ______________________________

Time spent ______________ Date search completed ______________
Sources (including years) checked by library staff (see reverse of sheet)
Progress report (see reverse of sheet)
Searchers names: ______________________________

Suggested form for requesting bibliographic reference service

Author			
Title			
Journal			
Volume	No.	Pages	Date

Suggested bibliographic work slip

The proportion of different types of questions will vary with the function of the institution, its specialty and the individual needs of its clientele. Some of the most frequent questions deal with the treatment of diseases by the use of specific drugs or by other types of therapy the latest work on nutrition and vitamins, and questions related to surgical technique or specific operations. Other questions relate to current trends in medicine such as the place of women in modern medicine, socialized medicine, group and hospital insurance, the National Health Program, and the Social Security Act. Many questions refer to developments in the field of public

health, statistics on the incidence of disease and mortality in certain geographic areas, and the public health laws of various states and countries. Illustrations of questions encountered and the necessary steps to be taken to obtain answers follow

Specific factual information

Requests for specific factual information, e.g for an address, are frequently received by telephone. Usually only a few moments are required to supply this type of information, but sometimes several sources must be searched. For instance

Question How many beds are available at Michael Reese Hospital, Chicago?
Answer American Medical Association, *Directory* 18. ed., 1950, p. 672, lists 573 beds *Hospitals 26* Pt. 2, June, 1952, "The administrator's guide issue, p 30, lists 702 beds. *Journal of the American Medical Association 150* September 27 1952, "Internship and residency number p. 284, lists 727 beds. This was regarded as the most recent information and was given to the patron.

Question What is the address of the Wellcome Research Institution, England, and who is in charge?
Answer Address found in *World of learning,* 4 ed., 1952, p. 341 Another possible source is *Minerva, Jahrbuch der gelehrten Welt*

Question What was Dr Banting s original publication on insulin?
Answer Garrison and Morton, *Medical bibliography* 1943, p. 221 and Kelly *Encyclopedia of medical sources* 1948, p. 24 gave Banting, Best, and Macleod, *American Journal of Physiology* 59 479 1922, and Banting and Best, *Journal of Laboratory and Clinical Medicine* 7 251, 1922. Both articles had the title, "The internal secretion of the pancreas.

Question What is the normal length of an arm?
Answer Dublin, *Facts of life from birth to death* 1951, p. 356-57 Charts of Selected Body Measurements, gave 25.2 inches for men 23.0 inches for women.

Sometimes what seems to be a fairly simple question can require a time-consuming search, if the reader fails to give sufficient information, for example

Question Information was wanted concerning a new drug called dinacrin, particularly its therapeutic uses no disease was specified.
Answer *Modern Drugs* Supplement to *Modern drug encyclopedia 1* 214 1952, gave manufacturer chemical name and formula, description, action, uses, administration, and the important additional informa-

tion that this drug is also known as "isonicotinic acid hydrazide. *Unlisted Drugs* 4 39 1952, gave information which included composition manufacture, action, and references to the literature. Using the clue afforded by *Modern Drugs* the librarian searched the *Current List of Medical Literature* under nicotinic acid derivatives," and there the therapeutic use of the drug in question was found. Even a small library should have sources such as *Modern Drugs* available because articles on specific drugs cannot be located without difficulty and loss of time unless the additional information is provided by such a publication. Neither the *Quarterly Cumulative Index Medicus* 1950–51 the *Current List of Medical Literature* 1950-52, nor Dorland, *American illustrated medical dictionary* 1951 mentioned the drug by name

Selected references

Libraries are frequently asked to supply references on a given subject covering the last ten or fifteen years. The following are examples of helpful sources for such a search of the literature *Index-Catalogue* 4. Series, if subject falls in the letters D to M (since the volumes covering this part of the alphabet were published within 15 years) *Current List of Medical Literature* *Quarterly Cumulative Index Medicus* *Excerpta Medica* *Biological Abstracts* and *Chemical Abstracts* Current issues of journals likely to include material on the subject wanted must also be searched for articles too recent to have been indexed in these sources. When more extensive bibliographies covering longer periods are required, it becomes necessary to consult all the series of the *Index-Catalogue* and, for some of the material published before 1927 the *Index Medicus* Care must be taken to note the date when the last volume of the *Index-Catalogue* covering a given subject was published, in order to begin at that date to search the other bibliographic indexes for the more recent material.

The preparation of comprehensive or complete bibliographies requires much time, and service of this type should not be attempted without a large staff The type of reference aid which can legitimately be expected of a good medical library and the steps necessary to give it are illustrated by the following example

Question History etiology pathology and treatment of infectious mononucleosis. In this case, early work was wanted as well as recent material, but not a complete bibliography

Sources for general description and introduction the library's catalog should be examined for books containing chapters on the subject, since these

frequently start with a brief outline of important work done which furnishes clues to names of authors working on it and dates when work began, thus facilitating further literature search. The following material was located in this way R. L. Cecil *Textbook of medicine* 8. ed., 1951 (contained good description and bibliography giving original description of the disease by E. Pfeiffer in 1889) M. W Wintrobe, *Clinical hematology* 3 ed., 1951 J Brennemann, *Practice of pediatrics* Chapter 8, "Infectious Mononucleosis (glandular fever) H. Downey *Handbook of hematology* 1938, v 4.

Sources for periodical literature

Index-Catalogue, Series 2, under "Fever Glandular" Series 3 under "Glandular Fever and "Mononucleosis. Work with the *Index Catalogue* was complicated by the fact that there were no cross references from one term to the other In Series 4 under "Glandular Fever there was a *see* reference to "Mononucleosis, but the volume containing this term had not been published, rendering the *Index Catalogue* useless as a source for modern work on this subject.

Index Medicus. Since it was found that the early articles might appear under "Fever "Fever Glandular or "Glandular fever all of these terms were checked in Series 1 and 2.

Recent articles were found in *Quarterly Cumulative Index Medicus* under "Mononucleosis, Infectious *Current List of Medical Literature* under "Mononucleosis, Infectious *Excerpta Medica* Sections 4, 5 and 6 review articles too recent to have been indexed appeared in *Advances in Pediatrics Advances in Internal Medicine Year Book of Pediatrics Annual Review of Medicine Medicine* current issues of some of the important journals in medicine and hematology yielded articles too recent to be listed in any of the sources given above.

Questions on statistics

Questions on statistics frequently require use of government documents and involve an extensive search.

Question Give comparative figures for mortality and morbidity of smallpox in the United States.

For figures on mortality the following sources were checked U S Bureau of the Census, *Mortality Statistics* 1909-35 U S. Bureau of the Census, *Reports* 1935-44 U S National Office of Vital Statistics, *Vital Statistics Special Reports* 1944+ The section on "Deaths and Death Rates for 64 Selected Causes by Age, Race, and Sex" in this publication, *36* 225-63 and 467-515, 1952, supplied the figures wanted.

For figures on morbidity the following sources were checked *Public Health Reports Supplement Notifiable diseases reported incidence by states* last published as Supplement no. 206, 1948, then included in *Public Health Reports* 1887–1951. The sections at the back of each issue, "Prevalence of Disease (also called Incidence of Disease") appeared continuously from 1887 to 1951

For current information the following sources were checked U S. National Office of Vital Statistics, *Morbidity and Mortality Weekly Reports* 1952+ Metropolitan Life Insurance Company *Statistical Bulletin* (contains good comparative studies, such as "Cases of smallpox reported in the United States, 1920–1950,") *32* 9 1951

Other comparative studies of this type were also found in L. I. Dublin, *Twenty-five years of health progress* 1937 and in L. I. Dublin, *Health progress 1936* to *1945 a supplement to Twenty-five years of health progress* 1948 L. I Dublin, *Facts of life* 1951

When information of this type is wanted on a world basis, still other sources are needed

Question Statistics of prevalence of smallpox (variola) on a world basis.

Sources for history and background *Index-Catalogue* Series 1–3 under "Smallpox (History epidemiology and statistics) *Index Medicus Quarterly Cumulative Index Medicus Current List of Medical Literature*

Sources for statistics League of Nations, *Epidemiological Intelligence* 1922–25 League of Nations, *Annual Epidemiological Reports* 1922–40 League of Nations, *Statistics of Notifiable Diseases* 1927–31 League of Nations, *Weekly Epidemiological Record* 1922–44 World Health Organization, *Weekly Epidemiological Record* 1945+ U S. Bureau of the Census, *Vital Statistics Special Reports* 1934+ (for special summaries, such as Tables 11–13 covering 1920–36 in the article "International Vital Statistics, 9 345–461 1940) U S Public Health Service, *Summary of international vital statistics* 1947 Tables 20, 21 and 22.

Sources for statistics regarding Latin American countries U S Bureau of the Census, *Summary of Biostatistics* 1935–40 Pan American Sanitary Bureau, *Informe Mensual* 1944–51 Pan American Sanitary Bureau, *Estadistica Sanitaria* 1952+

Questions presenting unusual difficulty

Frequent questions which are difficult to answer relate to medical discoveries" noted by readers in the lay press. The current issue of *Science News Letter Weekly Summary of Current Science* issued by Science Service, Washington, D C., is helpful for obtaining accurate data concern-

ing such news items at the intermediate stage between the appearance of the newspaper notices and the publication of the article, but sources are not always cited. *Medicine in the News* (Schering) is also helpful.

Some practical suggestions which are useful in solving reference problems can be found in M. Schrero, "Bibliographic Technique" (44) "Reference Procedures," Chapter 11 in the Special Libraries Association s *Technical libraries* (no. 1141) and "Reference Service and Reference Material in *All-India Library Conference papers* (1953) (22)

For answers not easily found in usual sources, a helpful publication is that issued by the British Information Service, Department of Scientific and Industrial Research, *Unanswered Questions* (London, no. 1, 1950, +) which appears at irregular intervals. The columns "Queries and Minor Notes in the *Journal of the American Medical Association* and "Any Questions" in the *British Medical Journal* are of interest to the clinician. Questions are answered direct to the inquirer and those of general interest are selected for publication.

At times librarians are faced with problems which tax their ingenuity because information necessary for their solution has not been provided by the reader Such problems, while difficult, are a challenge to the searcher s ability to follow what are often meager clues. Two illustrations of this type of question are given, outlining the step-by-step reasoning from the known to the unknown which is necessary to answer them.

Question Locate an article by Rachel Jenss on the Appraisal of the Nutritional Status of Infants which the reader thought was published about 1938.

Answer A search through the *Quarterly Cumulative Index Medicus* was unsuccessful but another reference by R. M. Jenss, "Gain in Weight and Its Association with Ancestry and Economic Status, *Human Biology* 12 532, 1940, was found. This article indicated that Miss Jenss worked in the U S Children s Bureau. A check of the numbered publications of the Bureau revealed Jenss, R. M. and Souther S P "Methods of Assessing the Physical Fitness of Children Pub. no. 263, 1940 (study made in 1938) Though the title differed from that requested, it proved to be the work which was wanted.

Question Request for "the sixth annual report of an international organization on cancer representing 37 institutions from 11 countries.

Answer By careful questioning the librarian discovered that what the reader really wanted was an international classification of cancer of the cervix which it was thought was determined at the sixth meeting of an international organization in 1951. The librarian searched the

Current List of Medical Literature 1951 and found the subject heading, "Uterus, Cervix—Cancer—Classification. The references cited were checked, and among them was found "Entschliessung über die Klassifizierung des Cervixkrebses auf dem Internationalen [und] dem 4 Amerikanischen Kongress für Geburtshilfe und Gynäkologie in New York City 14-19 Mai, 1950, *Strahlentherapie 84* 160, 1951. From this reference it was clear that the international aspect was connected with the fourth American Congress. The librarian turned to the catalog entry for the American Congress for Gynecology and Obstetrics, checked the volume for the fourth Congress and found that the International Congress proceedings were combined with the American Congress proceedings and that the volume also constituted the June, 1951 supplement to the *American Journal of Obstetrics and Gynecology* On page 410 the Classification of Cervical and Other Genital Cancer appeared. "Panel Discussion" on page 424 included the modification of the classification adopted by the Health Organization of the League of Nations in 1937 This was the classification wanted. A catalog entry under the International Congress of Obstetrics and Gynecology also indicated that its proceedings were published as an integral part of the fourth American Congress.

Preparing a bibliography of an individual's work

Preparing a bibliography of an individual s work requires a somewhat different approach than a subject bibliography It is advisable to begin by obtaining complete biographic information surname and given names or initials names of schools attended date of graduation names of university or institutional connections since graduation subject fields of interest. The sources to be consulted will vary depending on whether the individual is contemporary or not. See page 279 and Russo (no. 219) for examples of good sources for contemporary biographic information. After as much biographic data as possible has been obtained, the searcher may know in what type of index and during what periods to search for articles written by his author Appropriate sources to search vary with the nationality of the author Nonmedical sources must not be overlooked, as physiologists, biochemists, anatomists, and psychiatrists frequently publish material in journals not indexed in the usual medical indexes and abstract services, and articles by physicians written for lay readers can be found in nonmedical sources. Articles in periodicals may be indexed in *Readers Guide International Index to Periodicals Quarterly Cumulative Index Medicus Index Medicus Current List of Medical Literature Excerpta Medica Chemical Abstracts* and *Biological Abstracts* Special subject in-

dexes and abstracting services should be checked, depending on the author s specialty The following indexes should also be checked for books and monographs *Cumulative Book Index Quarterly Cumulative Index Medicus* (Books Published) *Index-Catalogue Armed Forces Medical Library Catalog Index Medicus* Library of Congress *Catalog* Definitive bibliographies of individuals should include editorials, ephemeral speeches, discussions, and reviews. Because such material is usually not included in the indexes and painstaking and time-consuming search is required to locate them, definitive bibliographies should not be undertaken by the average library unless professional bibliographers are available.

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chapter 12

Rare books and the history of medicine

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ENTHUSIASM FOR THE HISTORY OF THEIR PROFESSION has long been displayed by medical men. From Symphorien Champier's *De medicinae claris scriptoribus* (Lyons, 1506) to the profusion of books and pamphlets which issue from the presses today, writings on all phases of the subject have come from the pens of physicians. The value of the study of the history of medicine has been discussed often by eminent authors and needs no repetition here. For a recent article, see George Rosen's "History in Medical Education," (9) which covers the subject well. The number of collections on the history of medicine and its allied fields attests the interest which has led to the careful garnering of the writings of men of centuries past.

Scoffers who belittle the achievements of their forebears have even less understanding than the "bibliomaniac" who feels that the "rare book" is a treasure to be kept carefully behind glass doors as a museum piece and to be exhibited occasionally for its fine printing, exquisite binding, or as a landmark in the progress of human achievement. The librarian must reflect this point of view with real reverence for beautiful and priceless volumes, but he must consider primarily the needs of the historian who realizes the importance and value of the texts of all periods. A collection of works on any historian's subject will show not only examples of early printing, or of fine manuscript, but also the less attractive items of later years which demonstrate the growth of knowledge to the present time. Outstanding contributions to medicine made in any century light the way for the historian; obscure texts offer him further clarification, and it is for him that such a collection is gathered. Medieval manuscripts and incunabula, however valuable to the scholar, are outside the scope of the small library, but later and less expensive items, both in manuscript and in print, may be united to form an historical library of real worth.

The rare book collection

Although the small library can seldom hope to build a large collection of the more expensive volumes, it may not be amiss to discuss briefly the different fields of medical classics—medieval, Renaissance and modern manuscripts, incunabula, books of the later centuries, Americana—which together with books of reference form a well-rounded collection. Every contribution to medical knowledge may be regarded as a classic, ancient or modern, and it is not impossible to form the nucleus of a collection of outstanding works without a large outlay of funds, since modern editions and facsimiles are frequently available. These most important texts, whether in the original or not, must be supplemented by items of less obvious importance in the growth of medical knowledge, for often, in little known volumes, the historian discovers something of great interest to record. So as it is impossible for any library to amass large quantities of such material in every phase of the subject, the decision to concentrate on a particular aspect must be made, and made early. As every librarian knows, it is wise to build strength on strength, and the holdings of any collection point to some particular interest. This should prove a boon to the librarian surveying the field of medical knowledge for the first time.

Manuscripts

Manuscripts of the Middle Ages and the Renaissance are luxuries in which few libraries can indulge, and it seems superfluous to discuss them at length here. Acquisition of such treasures is usually limited to the gifts of patrons, and although every library would like to boast of such possessions, it is perhaps as well that temptations to buy them are not more common. One or two early manuscripts in a collection serve chiefly as ornaments for display rather than as books for scholarly study and the student prefers that his texts be available in the type of collection in which he expects to find them rather than being widely scattered. Seymour De Ricci and William J. Wilson's *Census of medieval and Renaissance manuscripts in the United States and Canada* (no. 198) provides a guide to such material in North America. See also J. F. Ballard's *A catalogue of the medieval and Renaissance manuscripts and incunabula in the Boston Medical Library* (no. 193) and D. M. Schullian and F. E. Sommer's *A catalogue of incunabula and manuscripts in the Army Medical Library* (no. 206).

Later manuscripts may often be obtained without great expenditure. Such items as account books, memoranda containing case histories, bills, autograph letters, and diaries provide source material of real value. It is

Numbers in parentheses preceded by no. refer to items in the Bibliography at the end of this *Handbook*.

especially wise for the librarian to concentrate on the local scene. A rich mine of information must await the historian in many parts of this country and it is the librarian's task to discover and preserve such records in his own area before they are discarded or lost. Private individuals interested in the collection should be approached and requested to deposit such material in the library for safe keeping. Local medical organizations should be happy to have a place in which to leave their archives where no careless secretary can misplace them. Minutes of meetings of medical societies serve as intimate historical documents, and if an organization prefers to have its proceedings kept from public view and consulted only when official consent is accorded they may be deposited with that stipulation. Letters of today from well-known medical men, even though typewritten, should be filed permanently. Their contents may supply needed information to a future biographer or historian, and their autograph signatures are always of interest. Manuscript records of the library's own organization are discussed later in this chapter under Archives.

Incunabula

Incunabula also belong to the luxury class. Few libraries can expect to build a large collection of such materials. The librarian proposing to do so will profit by a careful perusal of George A. L. Sarton's "The Scientific Literature Transmitted Through the Incunabula" (no. 205) written from the point of view of the scholar rather than that of the bibliophile. He should also read Arnold C. Klebs' "Gleanings from Incunabula of Science and Medicine" (6). Klebs' many years of study on the subject qualify him to speak with authority and his *Incunabula scientifica et medica* (no. 201) is an invaluable tool for the student. Here we find listed all recorded editions, with contents cited and references to more detailed descriptions. For medical works published from 1467 to 1480, Sir William Osler's *Incunabula medica* (no. 204) provides not only bibliographic descriptions but also an introduction containing a discussion of the earliest medical publications. See also Ballard (no. 193) and Schullian (no 206) for descriptions of the fifteenth century books in two outstanding collections.

Books printed after 1500

Sarton writes, "It is very desirable that some scholars should devote themselves to the study of the sixteenth century scientific books. For the scientist (vs. the bibliomaniac) sixteenth century books are just as important as the fifteenth century ones; in fact, I would say that they are more important. " (11 p 90) This seems particularly true of medical

books. The fifteenth century produced no Vesalius, no Paré, nor did the best editions of Galen and Hippocrates appear in those years. Claudius F Mayer's "Bio-bibliography of Sixteenth Century Medical Authors" (no. 177) unfortunately discontinued after its initial appearance, will be infinitely useful to the medical historian and librarian if the author can resume work upon it. Editors and translators of the works of earlier authors are included, but the vast number of publications in that century of the writings of the earlier men appear only under the names of their editors or translators. Mayer originally planned, however to add a section listing that material. Such works printed at that time reflect the interests of the century as surely as do those from the pens of contemporaries, and a survey of those editions listed under the names of the original authors would be equally useful. A project instituted by William Jerome Wilson at the History of Medicine Division of the Armed Forces Medical Library is intended to provide that information, for he plans to fill in the gaps in that collection by procuring microfilm copies of texts of the sixteenth century which are lacking This entails searching out copies in libraries throughout the world. A check list of the sixteenth-century books in the Armed Forces Medical Library is to be published and thereafter check lists of the supplementary holdings of other libraries. If this ambitious project is brought to completion, it will indeed be a boon to scholars.

The classic revival was in full swing in the first half of the sixteenth century and a flood of translations poured from the presses. Editions of Hippocrates, Galen, Celsus, and many others, were translated or edited by distinguished scholars and obscure students. Throughout the century these were published, together with the varied contributions of the men of the period books on anatomy surgery obstetrics countless tracts on epidemics and on specific diseases books on domestic medicine collections of "consilia" or case histories. Herbals embellished lavishly with woodcuts now boasted the addition of plants from the New World, as visitors to this continent returned home to give the old world their accounts of the new country with much to say about climate, diseases and remedies. It was in this century that the really basic texts relating to modern medicine were first issued. Some were intended for the scholarly physician, others for the less learned surgeon or for use in the home. Works in the vernacular became more frequent. The writings on surgery of Ambroise Paré and many texts of Paracelsus, as well as of the popular Ryff and Roeslin, were made available to those unable to read Latin. By the end of the century a vast number of books of medical interest were in circulation. Many of these are dull and mediocre and serve the historian only by displaying the ideas of the period others may be examined today with a real reverence

for their influence upon the progress of the science of medicine while still others, little known may offer undiscovered facts to the investigator

Serials

It was not until the seventeenth century that one of the greatest contributions to scientific literature was made—the publication of the transactions of the learned societies. An excellent account of the birth and early development of such literature may be found in Martha Ornstein's *The rôle of scientific societies in the seventeenth century* (no. 60) Fielding H. Garrison's "Medical and Scientific Periodicals of the 17th and 18th Centuries" (no. 182) lists the periodicals and shows the rapid increase in the number of such publications.

Americana

The earliest volumes in an Americana collection are obviously the accounts of the New World published in Europe by returning travelers. The late sixteenth century saw a few medical texts printed in Mexico, but it was not until the eighteenth century that American editions of European medical writings were supplemented by books, pamphlets, and theses of native Americans, and before the end of the century medical journals were introduced Sarton advises that every book printed before 1801 should be kept under lock and key Each library would thus be divided into two parts the ancient part, the growth of which would be under normal conditions very slow and hence where shelves would not need so many open places and the new part growing on the contrary very rapidly The ancient part would include all the books anterior to 1801 plus any other which it would not be expedient to leave on the open shelves " (11 p. 91) Thus the nineteenth and twentieth centuries would be represented in the "ancient part only by works of particular value. The cost of many of the American medical items of the nineteenth century would necessitate the inclusion of a larger proportion of American publications than those of other countries. In determining whether or not a book published after 1800 should be deposited in the "ancient part" the volume should be judged according to the importance of its text and the availability of the volume in the market, as well as its monetary value. It is obvious that the first edition of William Beaumont's *Experiments and observations on the gastric juice* (Plattsburgh, 1833) should be shelved with the more valuable books but so should such scarce items as some of the Civil War imprints of the South, such as Francis P Porcher's *Resources of southern fields and forests* (Richmond, 1863) No one would dispute the careful protection of the Roentgen reprints of 1895 and 1896 but the same care

should be given to the early announcements of the Female Medical College of Pennsylvania, less costly but equally scarce.

Translations, facsimiles, annotated editions

A library with little to spend may make a start toward a collection of the outstanding medical texts by purchasing them in modern editions or facsimiles rather than in the original editions. Emerson C. Kelly the editor of *Medical Classics* (unfortunately suspended in 1941) performed a valuable service by presenting in his journal English versions of noteworthy contributions, complete with references to the original texts, lists of the writings of the authors, and short bibliographies of biographic sketches concerning them. English translations of other texts may be found in Logan Clendening, *Source book of medical history* (no. 309) John F Fulton, *Selected readings in the history of physiology* (no. 1475) Thomas S Hall, *A source book in animal biology* (no. 1965) Esmond R. Long, *Selected readings in pathology* (no. 1359) Ralph H. Major *Classic descriptions of disease* (no. 1360) John Ruhräh, *Pediatrics of the past* (no. 1385) Herbert K. Thoms, *Classical contributions to obstetrics and gynecology* (no. 1264) Frederick A. Willius and Thomas E. Keys, *Cardiac classics* (no. 909) The Sydenham Society in the nineteenth century brought out English translations of many notable medical works. A list of these may be found in the *Index-Catalogue* (no. 104 2. ser.) Excellent annotated editions or translations of some of the medical classics were published in the same period by the historians of medicine, Charles V Daremberg, Karl G Kuhn, M. P Emile Littré and Edouard Nicaise. These may also be found in the *Index-Catalogue* entered under the authors names as well as under those of the compilers or translators. See also Clarissa P Farrar and Austin P Evans, *Bibliography of medieval sources* (New York, 1946)

Collections of medical classics appeared as early as the fifteenth and sixteenth centuries, and occasionally these volumes may be purchased at prices which are not prohibitive. Johann Ludwig Choulant s *Handbuch der Bücherkunde* (no. 171) lists such material. It was not, however until after 1900 that the renewal of interest in medical history brought about the publication of such collections as the Teubner *Corpus medicorum Graecorum* and *Corpus medicorum Latinorum* the *Klassiker der Medizin* edited by Karl Sudhoff the *Opuscula selecta neerlandicorum de arte medica* the *Collectio ophthalmologica veterum auctorum* edited by P Pansier and the medical texts in the "Loeb Classical Library" published by the Harvard University Press. Series of facsimiles, too, have made outstanding texts easily accessible, such as Henry E. Sigerist s "Monumenta

medica" Gustav Klein's "Alte Meister der Medizin," and the publications of the Institute of the History of Medicine of Johns Hopkins University The contents of some of these collections may be found in the *Index Catalogue* (no. 104) Others are not as easily available, but since individual volumes are entered in the *Index-Catalogue* under the authors of the works, the librarian wishing to acquire an edition of the writings of an early medical man can usually learn if a modern edition has been published. A list of medical classics in facsimile compiled by Keys (5) shows the range of texts considered worthy of reproduction. Some of these facsimiles are easily procurable others are as difficult to find as original editions.

Archives

The librarian of the smallest library may perform a valuable service by preserving records which in future years will have importance for historians. This is particularly true of the archives of each librarian's own institution. While officers of the institution may realize the need for saving minutes of meetings, printed volumes, and records of obvious importance which they occasionally must consult, they are prone to discard ephemeral pamphlets, notices, directives, press releases, etc. as well as important correspondence and manuscript notes providing news of the association's activities. The result is, of course, that none of this material is saved for the historian or public relations official of fifty or a hundred years hence who will spend many hours trying to locate such seemingly valueless items. The librarian should impress this point of view upon those in other departments of the institution so that the need for depositing such items in the archives is understood. If there is no time to catalog them, they may be filed in folders by subject. If that is not possible, they can be stored in boxes. They will not take up much valuable space, nor much valuable time but they will survive, and that is the essential point. If cataloging is contemplated see Chapter 6 for a classification scheme.

Ephemera

It is obvious that the most significant contributions of today are the rare books of tomorrow It is not so obvious, perhaps, that ephemeral and fragile material, unesteemed today may also be scarce and costly a hundred years from now Many examples from the past may be cited to show this, such as the early fugitive anatomic plates, the bloodletting charts, the handbills and broadsides of any period. The *Tabulae sex* of Vesalius is far more precious than the editions of the *Fabrica* The reprint of Oliver Wendell Holmes article on puerperal fever commands a price ten times as great as copies of the journal which contain the original printing

Covers of the *Boston Medical and Surgical Journal* which bear the earliest announcements of ether make those numbers more valuable than some of the early writings on the subject. Other small items, though not expensive, often have for the historian more importance than costly volumes for the historian seeking bits of information has found needed clues in lecture tickets, catalogs of medical schools, reports of hospitals, drug advertisements, sale catalogs of instrument-makers, programs of meetings, announcements, diplomas, and printed circulars.

The librarian should learn that the throwaways of the present may one day be highly prized and avidly sought. Since it is impossible and futile to save everything in the deluge of daily accumulations, the librarian must be alert to salvage the oddments that may eventually be significant or informative. The material of the past can guide the librarian by indicating what should be saved today

Literary works

The physician has not devoted his literary talents solely to history and biography Many prominent figures in literature have studied or practiced medicine in their younger days. The many novels, mystery stories, autobiographic recollections, essays, and poems that have come from medical men in the last few years, supplemented by contributions of earlier men, would form a large collection of entertaining reading matter suitable for a variety of tastes. To such a collection should be added novels which are concerned with subjects akin to medicine, for they have provided the inspiration for the works of the many authors responsible for books about medical men, nurses, hospitals, medical students, faith healers, and patients suffering from disabilities both physical and mental. Most volumes of this sort may be purchased cheaply and many doctors might be happy to present copies of their own books to the library James H. Davenport's *Literary doctors of medicine* (no. 1147) and Charles L. Dana's *Poetry and the doctors* (no. 1146) present surveys of such material, and Thomas K. Monro's *The physician as man of letters science and action* (Glasgow 1952) includes many biographies of medical men who were authors or poets.

The reference collection

Bibliographies

The medical library close to a large general reference library does not have to consider adding the expensive general works to its collection and may limit its acquisitions to some of the many medical and scientific bibliographies. These include carefully annotated bibliographies of the

works of individuals, check lists of specific subjects, catalogs of the hold
of individual libraries, as well as the exhaustive works covering the sul
as a whole. The field of medical bibliography is a rich one. A glanc
Henry R. Viets's "Bibliography of Medicine," (no. 170) shows the we
of general medical bibliographies which were published before 1900.
also Brodman (no. 167) and Fulton (no. 168) Obviously the ear
bibliographies have been superseded but often some small point ma
found in them which later bibliographers have ignored. A library wl
has on its shelves the most useful of the more recent tools should
neglect the earlier contributions. This may be said also of the gen
nonmedical bibliographies. It was a physician, Conrad Gesner who ear
the title "father of bibliography" by his amazing *Bibliotheca univers*
(Zurich, 1545) which today stands on the shelves more as a reveren
monument than as an actively used reference work. Yet even now infor
tion buried there for several hundred years may be occasionally cul
from this work or from later editions of it. Non-medical bibliograpl
deserve a place in any medical library which can afford them and are of
of more use to the cataloger than those limited to medicine. The catalo
of old books needs information concerning the physical description of
volume at hand which is, as a rule, lacking from subject bibliographies
catalogs of libraries The bibliographies of individuals, such as those
Harvey Cushing, Geoffrey L. Keynes, John F Fulton Janet Doe, a
William R. Le Fanu, present such details, but they cover few authors. Su
material may occasionally be found in the sale catalogs of booksellers wh
often provide lengthy annotations and should supplement any collection
bibliographies. They are an important feature of any reference collectio

Biographies

Enthusiasm for medical biography and autobiography was not
evident several centuries ago as it is today Girolamo Cardano's story
his life reads as interestingly now as when it was written but there a
not many contemporary works of the kind. Rosen's *400 years of a docto*
life (no 235) offers a generous and fascinating sampling of autobio
raphies of physicians. In the eighteenth century Nicolaus F J Eloy pu
lished his four volume *Dictionnaire historique de la médecine* (no. 22
a still-useful work on which some of the later biographic dictionaries we
based. The nineteenth century saw the publication of a number of vo
umes of that sort as well as numerous biographies of individuals ar
collections of the essay type which are popular in this century The lis
of biographies and collections of biographic sketches in Garrison's *Histo*
of medicine (no. 311) and in his "Available Sources and Future Prospec

of Medical Biography" (no. 218) testify to the large number of such publications. The largest bulk of biographies at the present time appears in medical journals, and many of these are of men of former times.

Histories

For centuries the physician has been interested in the history of his subject, and a mass of literature, good and bad, has been the result of his enthusiasm. Historians of today must be grateful for the scholars who have turned their attention to the past and compiled exhaustive and detailed volumes. Though many phases of medical history have been as yet inadequately covered, the deluge of historical material pouring from the presses today is a source of both pleasure and pain to the historian. The very quantity is a problem for one interested in covering his subject well for the librarian who must make a small selection the task is formidable. There are scholarly volumes that are necessary for the serious worker There are short histories for one who wishes a brief review of a subject. There are readable books for the physician who would enjoy an introduction to the story of the past. There are popular tales, well dramatized for the layman. There are histories of scientific subjects allied to medicine, and lay histories and local histories containing needed articles. There are monographs and reprints and privately printed essays. And there are serials devoted exclusively to the history of medicine. The continued flow seems inexhaustible.

Book selection

The most obvious factor in the selection of books in any collection is the amount of money budgeted for book buying In this the rare book collection is, as a rule, particularly unfortunate. Not only is there little to spend on such a luxury in a small library but prices of the earlier and scarcer volumes are of course very much higher than those of the more recent works. Thus what little there is to spend must be carefully meted out. The first consideration should be the proportion of money to be allocated to the historical reference works, which in most libraries are of more actual use than the early volumes themselves. As some of these contain excerpts or translations from the early texts, they supply material which the library could not otherwise afford Their real worth lies in the fact that they serve as a guide to the historian and librarian seeking information about early texts, contributions to knowledge, or the lives of the men who were responsible for them. In a small library at least 50 per cent of the funds allotted to rare books and histories should go for such volumes. In some libraries, where facsimiles and modern editions of old

texts will usually serve the purpose, the proportion spent for the early editions will obviously be much less.

Types of books chosen

Another consideration is inevitably the type of material in which the readers are especially interested. In some cases this material is easily defined. If there are not enough requests for scholarly reference tools to warrant expenditures in that direction, it is obvious that the more readable volumes should be emphasized. If general interest seems to be concentrated in the later periods of medical history or confined to that of particular localities, these subjects should be stressed when adding volumes to the shelves. The library on which a wide variety of demands is made must depend on the more general texts to cover the specific aspects. Although the scholar requires for his work obscure texts or histories of limited scope, the small library catering to divergent interests cannot hope to supply such material, but must depend on a larger library for it.

The proximity of other libraries, medical or general, containing bibliographic and biographic tools, incunabula, or other early works, also influences the choice of books. Only the most used volumes need be duplicated other works available in a conveniently located collection need not be purchased. Unnecessary duplication is particularly serious in building a collection of early material, for haphazard collecting by a number of libraries in one community or section performs no service for the scholar or student. It results not only in the duplication of particular volumes, but also of collections on the same subject, which forces the student to resort to one library after another in order to consult a few out-of-the-ordinary books on that subject. When starting to build a collection no matter how small, the librarian should always consider the resources in his community It is wise to consult other librarians of the locality for cooperative collection is a partial answer to the overwhelming problem of crowded shelves. In fact, the desperate need of space, the always too-scanty funds for purchase, as well as the disadvantages to students of duplicated collections indicate that the future must bring much stronger cooperation in collecting In the past, rivalry among libraries has produced among other evils the senseless bidding against each other which makes prices soar In the future perhaps a less greedy and more responsible attitude will bring about the ideal of all historians, the consolidation of collections which libraries may achieve by relinquishing some of their valued holdings in return for more suitable holdings from other libraries. If each library in a community limits its collecting to specific subjects allotted to it, the librarian's task will be simplified, funds will be more

wisely spent, shelves will be less crowded and the scholar for whom the library is intended will benefit accordingly

There is another pitfall to be avoided. The librarian must not feel that all the great contributions to medicine must be procured in the original. Their cost is prohibitive and their use limited. They are the gems, surely that highlight a collection, but in a small collection they are gems only Many of them have been thoroughly studied, reproduced in facsimile, and critically annotated. They often have little to offer the historian for whom the volumes are being brought together and they are easily found in larger libraries when needed. The amount it would be necessary to spend on just one of these will purchase many works of more immediate use. Every medical library would take pride in owning first editions of the classics of medicine, but it is the collection as a unit that is important, not the possession of a few treasures.

The librarian planning to build a collection of medical classics must first form his own conception of the history of medicine. This may be done by carefully reading a short general history of medicine and some of the short histories of specific subjects of medicine as well as seeking the advice and counsel of some physician interested in the history of his subject. The librarian can absorb much of permanent value from the physician who has the time to keep up with historical literature and who is willing to pass on his knowledge.

A good short history such as Singer s *A short history of medicine* (no. 325) might well be recommended, as well as Douglas Guthrie s *A history of medicine* (no. 313) and the volumes published in the Short History Series and Clio medica, and such works as Clendening s *Source book of medical history* (no. 309) Fulton s *Selected readings in the history of physiology* (no. 1475) Long s *Selected readings in pathology* (no. 1359) and Major s *Classic descriptions of disease* (no. 1360) In supplementing this information, Osler s *Bibliotheca Osleriana* (no. 187) is helpful because of its classification the most important works appear under the heading Bibliotheca prima" less notable volumes under "Bibliotheca secunda other works under the headings Litteraria, Historica, Biographica, Bibliographica, Incunabula and Manuscripts. Osler s own notes and those of the editors help to make the volume an invaluable tool in any medical historical collection. A bird s-eye view of the entire field of the history of medicine may be found in Sigerist s "On the Teaching of Medical History (no. 305) Garrison s Revised Students Checklist" (no. 172, note) provides an index by subject of "important milestones" and "references difficult to come at, and *Garrison and Morton s medical bibliography* (no. 172) must be at hand for constant use in appraising the

importance of contributions to every phase of the history of medicine.

For those who wish to concentrate on Americana, Samuel D Gross's *History of American medical literature* (no. 442) and Osler's "Some Aspects of American Medical Bibliography" (8) are still useful, and the New York Academy of Medicine's *Catalogue of an exhibition of early and later medical Americana* (New York, 1926) serves as a guide to the most important items. For short histories covering the American scene, Sigerist's *American medicine* (no. 449) Maurice B Gordon's *Aesculapius comes to the colonies* (no. 441) and Henry B Shafer's *The American medical profession* (no. 448) provide general background. Garrison's "Medical and Scientific Periodicals" (no. 182) should be at hand for the librarian fortunate enough to consider the purchase of early periodicals. The check list is supplemented by an informative introduction with references to other bibliographies of the subject. Bernhard W Weinberger's chronologic list of dental books, 1530–1810, and his list of early medical classics containing dental sections may be found in his *Dental bibliography* (no. 935) Through a careful perusal of such material the librarian can hope to absorb the broad outlines of medical history in order to note the gaps in a collection and to pass judgment upon volumes needed to fill them.

Book values

For special points, such as problems concerning edition or price, other sources must be used Once a text has been tentatively selected for purchase, it is wise to determine which edition is the most desirable. Although very often the first edition of an important work is the one most coveted, there are exceptions. A later edition may boast a more accurate translation or revised text it may contain supplementary material more important than that in the original or perhaps the illustrations are superior The search for this information is often time-consuming, but well worth the effort involved. Garrison's *History of medicine* (no. 311) occasionally indicates the best edition for example on page 100, where he lists the important editions of the works of Hippocrates. For the texts of the early writers, Sarton's *Introduction to the history of science* (no. 50) is invaluable. Further material may be found in biographic collections, histories of special subjects, and annotated bibliographies.

Information about book values is of course available in the various series of records of book auctions here and in England, which may be consulted in a conveniently located general library when necessary Despite the fluctuation in prices, Max Sander's *Prices of incunabula* (Milan, U Hoepli 1930) is still useful. The library which is wise enough to keep on

file the catalogs of secondhand book dealers devoted chiefly to scientific works will have at hand material which may be of more assistance than that in the general auction catalogs. As many of the less expensive items seldom win their way to auction sales, the book catalogs are usually put to a more constant use despite the necessity of searching through each one. If the librarian can find the time, he should check current sale catalogs with the holdings of his library for he will find that the time is not wasted. Gradually he will become familiar with the approximate values of many of the books and will not need to search for such information. He will learn, too, which booksellers demand exorbitant prices. And, most important of all, he will become better acquainted with his own collection, for in this way he will discover what gaps exist on his shelves, what important texts are missing, and, in some instances, he will bring to light treasures which have long lain there unrecognized.

Every medical library should ask to be put on the mailing lists of those booksellers who deal primarily in medical and scientific books. It is helpful for the library to join the Bibliographical Society of America, as dealers use membership lists of such organizations, for catalogs not devoted to medical or scientific books should not be ignored. Often an interesting item, offered at a remarkably reasonable price, lies concealed among volumes on other subjects. A most extreme example of this was the listing at $5 in such a catalog a few years ago of a copy of Withering's *Account of the foxglove* (Birmingham, 1785) a volume offered usually for $200 or more. A medical library was fortunate enough to acquire it at that very low price—a rare event but less extraordinary bargains are occasionally offered. One such was the recent sale of a copy of the extremely scarce *Medicina curiosa* (London, 1684) the first English medical journal, for under $30.

The librarian purchasing costly books is warned that, once the new acquisition arrives, a careful examination must be made before payment of the bill, for one missing leaf can mean the volume is very much less valuable. Also, it is inadvisable for any library to spend money on "cripples," and defective books should be returned to the dealer. Lack of attention to the condition of a purchase can mean the loss of many dollars and the building of a collection of incomplete texts. There is no short cut to learning the values of early material. Only years of careful examination of the catalogs of dealers and study of the importance of texts will reward the librarian with a background of the necessary knowledge. Clipping of entries in catalogs, a tedious and time wasting procedure, is not recommended. An alternative is a permanent record on catalog cards. Whenever a copy of a book is offered the price and date may be jotted down on a

card made for that particular book. This, too, takes so many hours that it may not be worth attention. The librarian might be wiser to employ the services of a reputable dealer and rely upon his judgment. The importance of friendly relations with booksellers cannot be overestimated. Many are bookmen first and dealers second. Their interest in a library's collection can be greatly rewarding.

Aids to selection

The librarian wishing to enlarge his historical reference collection may find help in the Bibliography at the end of this *Handbook*, although other works must be used for material necessarily excluded from it. For a list of biographies of individuals, as well as a detailed, and often annotated list of histories, see Garrison's *History of medicine* (no. 311 p. 884–922) and his "Available Sources" (no. 218). A very few histories are listed in Garrison's "Revised Students' Check-list" (no. 172, note) and *Garrison and Morton's medical bibliography* (no. 172) contains a more comprehensive selection. Otherwise, the librarian must turn to the general indexes in the Bibliography for such works as histories of individual hospitals and institutions under their titles, histories of particular localities, biographies of individuals under their names, and histories of special subjects under the headings used for those subjects. The field of incunabula is particularly rich in bibliographic works. For a guide to such material see Margaret B. Stillwell's *Incunabula and Americana* (no. 217), whose reference list contains such medical subjects as anatomy, drugs, herbals, hygiene, pestilence. The bibliography in Sigerist's *American medicine* (no. 449) provides a check list arranged by subject. The annual "Bibliography of the History of Medicine in the United States and Canada" in the *Bulletin of the History of Medicine* is extremely useful for both books and articles. Current titles are reviewed in such journals as the *Bulletin of the History of Medicine*, the *Journal of the History of Medicine*, the *Bulletin of the Medical Library Association*, the *Yale Journal of Biology and Medicine*, and *Isis*, a periodical devoted to the history of science which lists several hundred current books and articles in its annual "Critical Bibliography of the History of Science."

Of course there is the library which has nothing at all to spend on luxuries. For such a collection there exists material which may be procured at little or no expense. Publications of drug houses often supply historical sketches or illustrations which may be clipped and filed by subject. Unfortunately *Ciba Symposia*, formerly published by Ciba Pharmaceutical Products, has been suspended. Devoted to carefully compiled historical articles, well illustrated, it deserves a place in any collection. Perhaps old

issues may be procured even now The Laboratoires Ciba of Lyons were responsible for seven attractively printed volumes in a series entitled *Les Vieux hôpitaux français* which appeared between 1937 and 1939 Some of the many historical contributions of Burroughs, Wellcome and Company may be found in the Bibliography A further fund of information may be obtained in the sale catalogs of secondhand book dealers, as many of them contain very useful annotations. Such material combined with reprints on historical subjects provides a helpful supplement to a small historical collection.

Cataloging

Descriptive cataloging is time-consuming and expensive, but its worth may be measured in the time saved by reference librarians and the bringing to light of facts otherwise locked away in unused volumes. Once a book is thoroughly described, the information is always available and obviates searching for answers to the same questions asked by different readers. Short cuts in cataloging the early literature are false economy By saving the time of catalogers, they not only waste the time of others but prevent the efficient use of the collection by not making its contents easily available. The primary purpose of descriptive cataloging is to reveal otherwise hidden material, and the value of the library to the historian often depends entirely upon that.

Old medical books and manuscripts offer few cataloging problems which differ materially from those met with in such volumes on other subjects. A brief résumé of the general principles of the cataloging of manuscripts and early books, with emphasis upon their application to medical books, should be sufficient in this chapter Entries on catalog cards should vary as little as possible from those for modern books, and instead of entering additional information on the cards, it is wise to type it on a slip of paper to be laid in the volume or arranged in a special file for that purpose. Thus confusion resulting from different forms of entry or from long and complicated entries may be avoided while any useful information discovered by the cataloger is available. Such additional details will be considered later

CATALOG CARDS

Author

The determining of the correct form of names of authors depends first upon the usage of the library As most of the early authors names were given in a Latinized form, the librarian must decide between the

Latin and vernacular versions. The vernacular seems to be the favored practice at present, although exceptions are often made for such men as Vesalius, Sylvius, Fabricius and others who are known best by the Latin form. For the well-known figures, a simple method might be to follow the entries in Osler's *Bibliotheca Osleriana* (no. 187) or Garrison's *History of medicine* (no. 311) For less important men who do not appear in those sources, various tools may be consulted Sarton (no 50) is especially helpful for Arabic names. Ulysse Chevalier's *Répertoire des sources historiques du moyen âge biobibliographique* (Paris, 1905–07) indicates where biographies of the men of the Middle Ages may be found and should be used only for that purpose, as the names are given in a French form and should not be considered as models. Mayer's "Bio-bibliography (no. 177) will provide an invaluable source for sixteenth-century medical authors if brought to completion. Histories of medicine of different localities may also be used They sometimes provide the only mention or sketch of an obscure medical writer Some general sources are more helpful than the medical works. Christian G Jocher's *Allgemeines Gelehrten Lexicon* (Leipzig 1750–51) and its supplements, 1784–1897 although old are of particular assistance in tracking down obscure men. It is especially good for German names. Luigi Ferrari's *Onomasticon repertorio biobibliografico degli scrittori italiani dal 1501 al 1850* (Milano, 1947) is the most complete for Italian physicians. For French, English, and other nationalities, there are various books which may contain the little known figures. Of course national biographic and bibliographic collections and medical biographic collections such as the *Biographisches Lexikon* (no. 220) are of constant help.

The search for the obscure figures is often time-consuming, as much confusion has arisen during the centuries from the habit of citing a man's name in Latin, in the vernacular or in the language in which a book was printed. The cataloger must remember always to consult different spellings and forms, such as Binder or Pinder Olmi or Ulmus, Craston or Crestone, Gallus or Lecocq Faucon or Falcon Faugeres or Fougeres, Faber or Schmidt, Piacentini or Placentinus. Typographic variations, too, present difficulties on occasion. "Gorju may appear as "Goriv "Kampf" due to an ornate Gothic capital may look more like "Rampf" or Ayrer may resemble "Ahrer

Furthermore, the custom in the earlier centuries of referring to a man by the name of his native town, as Guy de Chauliac, or his country as Gilbert the Englishman, was followed later by giving the same information after the author's surname. Occasionally careless writers dropped the surname when referring to someone. Thus we find Bernard George Penot

cited as Bernardus Georgius a Portu Aquitanus instead of Bernardus Georgius Penotus a Portu Aquitanus. This same man is called elsewhere B. G. Londrada a Portu Aquitanus, and still another writer gives him a more complete name: B. G. Penotus Londrada a Portu Sanctae Mariae Aquitanus. The cataloger must make sure that the name for which he is searching is actually a man's name, not the name of his birthplace. This, of course, does not apply to early men known only by the names of their native towns after their given names. If the nationality is obvious, much work is eliminated; for otherwise the cataloger may have to look through histories of medicine in various countries as well as national biographic collections before finding the desired information. Before entering into such a prolonged search, the cataloger should make sure that no autobiographic material in the author's books has been overlooked. Preliminary material, dedications, introductions, etc. frequently contain comments by the author which supply needed data concerning his life and assist the cataloger in eventually locating information about him. Once the correct entry for the author is determined, the cataloger should make sure that cross references are made for every variant form of his name.

Title

The earliest printed books were made to resemble manuscripts as much as possible, and like the manuscripts, they had no title pages. Titles for these, therefore, must be either made-up titles, or titles taken from the *incipits* which begin the text. The librarian must decide upon the course to follow. If *incipits* are used as titles, variant entries will separate the different editions of the same work, and references from each title must be made to the others. If made-up titles are used, all editions of a work will be in one place, and cross references from the variant forms will be necessary. If possible, it would be well to note the *incipit* of each edition on the card. For made-up titles, Klebs' *Incunabula* (no. 201) may be followed.

As title pages came more and more into vogue, their contents became longer and longer until the most elaborate and long winded titles crowded the page with all sorts of information about the book and its contents, as well as verses and quotations. It is obviously impossible as well as undesirable to reproduce these on cards so that only the most useful information should be abstracted. However, the excerpts selected for the title on the card should follow the title of the book exactly, indicating omissions. The Latin contractions present a problem which the individual library will have to solve for itself. In giving the title of a book, should the contractions be copied as they are, or should they be extended and bracketed? Obviously

most catalogers could much more easily copy the contractions in ink on the card than extend the abbreviations correctly. However, there are works which would help him in the latter, and a constant use brings familiarity. Most readers would certainly prefer to have the contractions extended for them. A useful and inexpensive volume on the subject is Adriano Cappelli's *Lexicon abbreviaturarum* (no. 214). The custom of early printers in using *v for either v or u at the beginning of a word and u for v or u medially need* not be followed on the card, as it creates confusion. This may also be said *for the use of i for j or j for i.*

Imprint

In the early books without title pages, and in many of the later ones with them, the information concerning the publication of the book was *printed in a colophon at the end of the volume. This colophon contained,* as a rule, the place of publication, the names of both printer and publisher and the date of publication. On the catalog card, some indication must be given to show that such an imprint appeared in the colophon rather than on the title page. "[Col.]" preceding the imprint may be employed to indicate this. The wording of the imprint may be reproduced on the card with extraneous information omitted and the omission indicated. Thus, instead of "Impressum Venetiis mandato & sumptibus heredum nobilis viri domini Octaviani Scoti civis Modoetiensis. Per Bonetum Locatellum presbyterum. Anno Virginei partus saluberrimi sexto supra millesimum quingentesimumque," the imprint on the card would read "Venetiis mandato ... heredum ... Octaviani Scoti ... Per Bonetum Locatellum ... 1506." The library which wishes further simplification may translate this for its readers "Venice, B. Locatellus for the heirs of O. Scotus, 1506. *The rules for contractions in the title decided upon by* the library should of course be followed in the imprint. The cataloger should be warned that confusion occasionally results from the differences between the old style and new of the calendar. An encyclopedia may be consulted for that information.

Books which have no imprint or whose imprint is incomplete require further study. When the place of publication or printer is not mentioned, the cataloger must try to supply such information. Incunabula have been so thoroughly described that the cataloger has only to record the findings of the scholars who have spent years of study identifying the early volumes, but the later books have not been so carefully treated. Some, of course, may be found in bibliographies with the necessary information, but for the most part these books demand further time and attention, and in many libraries such time is not available. However, if the cataloger can

continue the search, he will find that frequently the device of the publisher or printer appears at the beginning or end of a volume and may be identified with the aid of works on printers devices. Louis C. Silvestre's *Marques typographiques* (Paris, 1853–65) Hugh W Davies *Devices of the early printers 1457–1560* (London 1935) and other such books may be consulted in a conveniently located reference library If identification of the place of publication and of the printer is not possible through the printer's device, only patient research will prove fruitful, and often this brings no reward. An example of a successful search may be cited in the cataloging of a work by Janus Dubravius, *De piscinis* 1559 No place or printer is mentioned, and it is entered in bibliographies with different places of publication assigned to it. It contains a small tract by Xenocrates, annotated by Conrad Gesner On looking in the 1574 edition of Gesner's *Bibliotheca universalis* the cataloger found this work recorded with the note, procusae Tiguri apud Andream patruelem. Very often, however the search is unavailing and must be given up before too much time is spent upon it. Constant work with these early volumes makes the cataloger familiar with the works of certain printers, such as the Estiennes and Simon de Colines. This of course facilitates identification, for catalogs of the works of some of the well-known printers exist and may be consulted in a convenient library

Undated books do not present so difficult a problem. Except in certain instances, it matters little whether the exact date is found, and an approximate date is sufficient. Then, too, internal evidence in the book itself often guides the cataloger The preliminary material is especially helpful. The latest date cited is at least proof that the volume was not printed before that time, and there may be other indications to point the way Although dedications were often reprinted in later editions of a work, those published in an author's lifetime were not apt to include dedications to deceased patrons. An undated dedication, therefore, may assist in establishing an approximate date of publication if the date of death of the patron can be determined. Also, the author's description of himself in the book may be of help For instance, Heinrich Stromer of Auerbach became a doctor of medicine in 1511 after that date he was referred to as such in his publications, so that a volume edited by him in which his title is not mentioned may be arbitrarily dated prior to 1511 Occasionally the printer's device helps to date a volume, as works on the subject often point out in what years the device was employed. These are but a few examples of the many small clues which aid the cataloger They are intended only for that purpose. The cataloger cannot assume the role of scholarly bibliographer but he can use the facts at hand and make his own observations.

Collation

A knowledge of early printing methods is essential to the cataloger of early printed books. Ronald B McKerrow's *Introduction to bibliography* (no. 216) should be studied and kept at hand for reference. Chapters 4 and 5 of Paul S Dunkin's *How to catalog a rare book* (no. 215) are especially helpful to the tyro. Fredson Bowers' *Principles of bibliographical description* (no. 212) is for the expert. Every cataloger should be familiar with the methods of determining the format and the collation by signature. Only in this way can he tell whether or not his copy of a book is complete. He should also have a rudimentary knowledge of woodcuts and different methods of engraving so that he may correctly describe illustrations. This book is not the place to discuss such problems. Authorities on these subjects have provided detailed works for the student, and medical books need no other counsel. The cataloger anxious to learn should read books on the history of printing, of printing types, and of papermaking to acquire a background of knowledge. A study of these books, easily available in general collections, with the early books at hand to illuminate problems as they are considered will be of lasting value. Aside from those mentioned above, such works as the "History of the Printed Book," edited by Lawrence C. Wroth in the *Dolphin* 1938, no. 3 Daniel B Updike's *Printing types* (2. ed. Cambridge, 1951) Hellmut Lehmann-Haupt, Lawrence C. Wroth, and Rollo G Silver's *The book in America* (2. ed. New York, 1951) and Dard Hunter's *Papermaking through eighteen centuries* (New York, 1930) are of special value, while the Print Society's *How to distinguish prints* (Woodgreen Common, England, 1926) is necessary to the student of illustration. Lehmann-Haupt's *One hundred books about bookmaking* (New York, 1949) offers a guide to the study and appreciation of printing

A lengthy description of a book and a complete collation by signature should not appear on the catalog card unless the card is to be copied for the use of other libraries, but such a collation should be made before the catalog card is typed as very often a collation by signature will show discrepancies or missing leaves which collation by pagination or foliation alone will not bring to light. Once the volume under consideration is collated as perfect, the collation cited on the card should follow the rules for modern books. Early printed books and manuscripts were foliated rather than paginated and this of course should be indicated. The many errors in numbering need only be noted when the number on the last page or leaf is erroneous. If the book contains engraved plates or woodcuts not included in the foliation or pagination, these should be mentioned If illustrations appear in the text it is sufficient to add "illus." An imperfect

copy should have its deficiencies noted, and if possible missing pages should be supplied by photostat from another copy The collation by signature and a more complete physical description of the work should be given on the typed slip to be inserted in the volume as may be seen below under Typed notations.

Size and format

The measurements of old books should be taken from the pages rather than the bindings and should be given exactly After the size in centimeters, the format should be given. Folio, quarto, octavo, etc. when applied to old printed books should never be cited to indicate size but rather to show the format of the volume. The method of determining the format may be found in McKerrow (no. 216) and Dunkin (no 215) and every cataloger of early printed books must familiarize himself with this procedure.

Notes

Contents for which analytics are to be made, as well as the authors, brief titles, and imprints of other works bound with the volume, should be listed on the card if possible. In some cases, when a volume consists of many small pieces, it is necessary to omit them from the card and refer to the volume in which has been placed the typed sheet with the contents fully listed. Editors, when not mentioned in the title, should be noted, and it is useful to refer to any medical men concerned in any way with the volume. Often letters or verses written by physicians, or letters or dedications addressed to physicians, are of interest to historians or biographers of these men. Added entries should of course be made for them. Autographs of medical men should be treated in the same way It is always of interest to know the provenance of a copy and, if the former owners were medical men and wrote inscriptions in it, such information should be in the catalog.

SUPPLEMENTARY CARD LISTS

The work of both reference librarian and student is facilitated if the cataloger has the time to make available information not covered by the main card catalog Compilation of the following lists requires extra time which most libraries cannot spare, but their usefulness warrants their inclusion here.

Chronological lists

A list of the library s early books arranged by date of publication is easily compiled by making a brief entry under the date of publication. This

serves the librarian when he is checking particular editions of a work, as it is much simpler to look under the date of an edition by such an author as Galen when the exact title is not known than to run through a number of author cards. More important however is the fact that the student, wishing to see the publications in the library which appeared during a certain period, has only to look through the entries under the dates.

Americana English books published before 1641 Incunabula manuscripts

For the student who wishes to know what books the library has in each of these fields, such lists are needed, unless of course the same information is available through the shelf list. In that case, cards for items bound with other volumes should be made and filed appropriately

Illustrations

Cataloging of illustrations adds much to the work of the cataloger no matter how simply it is done, but such a catalog is of great assistance, for instance, in locating an early woodcut of a leech, a stretcher an artifical leg, or bloodletting With few exceptions the subject headings should be specific rather than general. Obviously it would be impossible and impractical to index every illustration individually in an anatomy herbal, or work on surgical instruments, and anyone seeking pictures of a particular part of the body or plant, or instrument would have little difficulty in finding what he wants in a volume on the subject. Thus someone hunting illustrations of the heart would look in the index under anatomy for general works and under "heart" to find the crude delineation in Gregor Reisch, *Margarita philosophica* (Basel, 1517) or in the *Bulletin of the History of Medicine* 1943, volume 14 opposite page 155 for a picture of the heart of a mummy of the XXIst dynasty Entries should be brief, so that as many as possible may be listed on each card, but enough information should be provided to offer some identification. This is especially true of pictures in modern works with reproductions of earlier material, as the dates of publication then give no idea of the period of the illustration For example, such notes are helpful as "from a 14th cent. MS. in color , "Japanese print showing interior of a pharmacy in Osaka, 1850" 'hospital train and evacuation hospital near the battlefront, World War II" Caricature by Rowlandson McBurney operating in Roosevelt Hospital, N Y 18th cent. after a painting by Geyer " The value of an illustration index is incalculable, as it not only prevents hours of searching, but it also makes available pictures and subjects otherwise impossible to find.

Owners of copies

A list of owners of copies is useful particularly for an exhibition of books from the libraries of well-known physicians, or of bookplates, autograph signatures, or bindings. It also supplies necessary information on books formerly in the collection of a certain person or institution.

Printers and publishers

A card index of printers, publishers and places of publication often helps the cataloger identify the printer of a volume which has no imprint or an incomplete one. It is also of service to the student wishing to know what medical books were issued by a particular printer or publisher or in a particular locality It is wise to have one list arranged under the names of the printers and publishers and another under place of publication.

Physicians to well known figures

Requests for information concerning diseases and infirmities of famous people are familiar to the medical librarian. When the cataloger notices a statement in a biography that a certain doctor served as the personal physician to any eminent personage, he may note the source on a card under the latter's name with a reference to the physician, and this entry can lead to other needed information in the future.

Dedications verses etc.

Questions occasionally arise concerning patrons of medical men. An index of the men to whom early volumes were dedicated helps to answer such questions, although it is obviously not of great importance. Such a list limited to dedications addressed to medical men would be of more use. This may be said also of authors of verses, letters, and other such material in the early volumes. If the letters were written by prominent physicians, they are of course worthy of special mention.

TYPED NOTATIONS

Although typed notations containing information which cannot be included on the catalog card may seem additional work, and much of it of little use, over a period of years it often saves time for both the cataloger and reference librarian. To catalog a book fully and correctly requires as much time when a card only is made as it does when the information so gathered is incorporated in a few brief paragraphs and typed for future reference. Typing is the sole added chore. These notes are useful for readers of the volume and helpful to the cataloger when sources for such

information are again needed Stillwell's *Incunabula and Americana* (no. 217 p. 183-86) lists briefly the kind of material which should be included. The cataloger may well feel that much of the following information would be unnecessary to record but the most insignificant point is often important to some historian.

The author title and imprint should be the same as on the catalog card. A complete collation by signature and by pagination or foliation and a detailed description of the volume, mentioning printer's device, engraved title pages, half titles, separate title pages, errata, register of signatures, etc., should be provided. The number of illustrations not in the text should be cited. For those in the text it is sufficient to say "woodcuts throughout text" or "engraved plates on pp 43 56 and 132, signed R. White, sculp. The Print Society's *How to distinguish prints* (London, 1926) is invaluable to the student of the different processes of illustration. The veriest novice must learn that in technical language a woodcut is not a plate," nor does it take much study to recognize methods of engraving such as stipple or mezzotint. If desired, it may be noted whether or not the book is printed in italics, in two columns, in red and black, or boasts exceptionally fine initial letters, but this is unnecessary for all but the earliest volumes.

Bibliographic references

In the course of cataloging a book, the cataloger necessarily seeks descriptions of it in bibliographies and library catalogs. References to these sources should be given. Bibliographies which supply the most useful and accurate information should be selected and references to one or two library catalogs should be included, even though they are only check lists, for they indicate where other copies are located. This may seem superfluous information when a copy is at hand, but readers may want to compare different copies of the same book, and correspondents may wish to know where other copies may be found in libraries convenient to them.

Description of copy

A description of a particular copy of a book also may seem superfluous. However such information is often needed by bibliographers and others engaged in research. The height and width of the pages in millimeters should be given. Any leaves or plates lacking from the copy should be noted, as well as any other imperfections such as torn leaves, wormholes, foxed leaves, and leaves badly cut down by a binder When two copies are in the library's possession they should be compared page for page and any slight variations noted

An accurate description of a binding is helpful when the library is

planning an exhibition of such material or when a student of the subject consults the library on its holdings. The cataloger should use E. P Goldschmidt's *Gothic and Renaissance bookbindings* (London 1928) for knowledge of the different types of earlier bindings. There are many fascinating volumes on the history of bookbinding in different periods and countries, and a visit to a general library would not be without profit. For a work on bookbinding in this country see Hannah D French, Joseph W Rogers, and Hellmut Lehmann Haupt, *Bookbinding in America* (Portland, Maine, 1941) A knowledge of leathers should be acquired by the cataloger Perhaps a bookbinder could be persuaded to present the library with swatches of different kinds of leather with labels identifying them. It is sometimes difficult to recognize leathers on books bound two or three centuries ago, but a familiarity with the different kinds of leather of today helps in many instances. The Society of Arts and the Worshipful Company of Leathersellers were responsible for a useful volume, *Report of the Committee on Leathers for Bookbinding* (London, 1905) edited by Viscount Cobham and Sir Henry T Wood. On the inside covers are inserted pieces of dyed and undyed seal, pig, calf, goat, and sheepskin.

It is always interesting to trace the owners of a particular copy of a book, and frequently adds value to it. M. Pierce Rucker in his "On the Use of Old Books in Medical Libraries," (10) includes a delightful paragraph on this subject. Autographs, bookplates, book labels, book stamps, and armorial devices on bindings should all be recorded. Many owners cannot easily be identified, and little time should be spent in searching for them, as only the important figures are as a rule worthy of interest. Bookplates occasionally lack the owner's name in such cases works like Henry André's *Les ex-libris de médecins* (Paris, 1908) and Kuno Waehmer's *Bücherzeichen deutscher Aerzte* (Leipzig and Wolgast, 1919) as well as the more general books on the subject may be of service. An article of interest to the cataloger "The Book-plates of Physicians," by Roland G Curtin, was published in *International Clinics* 20th series, volume 2 (1910) pages 223–54. For other articles on the subject see Samuel X. Radbill, *Bibliography of medical ex libris literature* (no. 791) Inscriptions, signed or not should always be examined. Old medical books occasionally contain interesting annotations in a contemporary hand, and enough of each one should be deciphered to ascertain whether it is worthy of the cataloger's time. Most inscriptions are merely favorite recipes of the owner or dull commentaries on the text, and these may usually be disregarded. For particularly interesting inscriptions found in incunabula in the Armed Forces Medical Library see Schullian's charming article,

"Old Volumes Shake Their Vellum Heads." (12) Aids for deciphering manuscripts will be discussed later under special points concerning different types of material.

Note

The note should contain all the useful information brought to light in the cataloging of the book. It should provide first a brief account of the value of the contents of the book or of any part of it. Does it contain the first known description of a disease, a treatment, an instrument or use of a medical term? Was it highly valued at the time of publication? Is it of interest today for its text for its illustrations, or only because it came from a man remembered for his other writings? These and many other questions may be answered by quotations from such authorities as Garrison, Osler Singer Sigerist Castiglioni, and Sarton. The date of the first edition should be mentioned and if many subsequent editions or translations appeared, that information should be added. Any details peculiar *to the edition of the book being cataloged should* be recorded *author's* correction or additions, if any additions of articles or annotations by others the name of the editor with a note of anything of interest in his connection with the work unusual facts culled from the preliminary material the latest date of the preliminary material pertinent biographic data concerning artists, printers, publishers, or other figures concerned in the compilation or publication of the volume. This seems long and complicated, but each volume presents different problems, and fortunately few require comments on all these points, while many the cataloger will find, merit none at all.

One or two examples of the type of information gleaned from preliminary material may be useful. An edition of the collected works of Arnoldus de Villanova contains a dedication written by the editor Thomas Murchius, a physician resident in Lyons, which explains that he was assisted in the editing of the book by Michael de Capella, a physician living in the same city A small tract by an obscure physician, Ferdinandus Eustachius, offers the information in the dedication that the author was the son of the famous Bartholomaeus Eustachius. These are small points, but they might well be of value to a historian or biographer Many letters to the reader dedications, and laudatory verses throw light on the life of some figure in the history of medicine or upon the circumstances which brought about the publication of the book.

Contents

It is well to list the contents of the volume alphabetically with the page numbers or folio numbers, so that the reader can easily find his way

about the volume. Such collections as *De balneis* *De morbo gallico* and *Medicae artis principes* should have their contents carefully noted and analyzed, as should collected editions of such prolific writers as Hippocrates, Galen, and Aristotle. When the library possesses several editions of such works, the contents of the earliest edition should be cited and only material not appearing in the earlier editions should be noted in the later editions. Even such a collection of material as the *Epistolarum philosophicarum medicinalium* (Franckfurt, 1598) compiled by Lorenz Scholtz von Rosenau, is well worth the time spent in analyzing the individual letters, for they represent the correspondence of the leading scientists of the period As this work would be duplicated in different libraries, an arrangement may be made for photostats of long contents notes to be supplied by the library whose copy has already been carefully cataloged.

SPECIAL POINTS CONCERNING DIFFERENT TYPES OF MATERIAL

Manuscripts

The cataloging of early manuscripts has been dealt with in books on the subject written by experts in that field and will not be considered in detail here. The librarian who wishes to broaden his knowledge of early manuscripts may find it profitable to read Falconer Madan's *Books in manuscript a short introduction to their study and use* (London, 1920) Other works are listed in "Some Auxiliaries to the Study of Medieval History by Louis J Paetow in his *A guide to the study of medieval history* (New York, 1931) a necessary volume for any student of the literature of the Middle Ages. The chapter referred to notes works on Latin paleography chronology place names, etc. Two interesting works supplementing those in Paetow are Berthold L. Ullman's *Ancient writing and its influence* (New York, 1932) and Samuel A Tannenbaum's *The handwriting of the Renaissance* (New York 1930) Few librarians have the time to make a study of paleography it is wise to consult authorities on the subject instead of hazarding a rough guess concerning the time and place of the writing of a manuscript, or of wasting valuable time trying to decipher script which could be easily read by an expert. Photostats of the manuscript, or perhaps the manuscript itself, may be sent to a nearby university whose scholars can quickly give the required information. With this at hand the cataloger's work is easy A glance at Warren R. Dawson's *Manuscripta medica* (no. 197) or De Ricci and Wilson's *Census* (no. 198) indicates the information the cataloger should supply See also Ballard (no. 193) and Schullian and Sommer (no. 206)

All of these details need not be included on the catalog card, but may be typed on a sheet of paper and placed in the volume or filed. The

"Old Volumes Shake Their Vellum Heads. (12) Aids for deciphering manuscripts will be discussed later under special points concerning different types of material.

Note

The note should contain all the useful information brought to light in the cataloging of the book. It should provide first a brief account of the value of the contents of the book or of any part of it. Does it contain the first known description of a disease, a treatment, an instrument, or use of a medical term? Was it highly valued at the time of publication? Is it of interest today for its text, for its illustrations, or only because it came from a man remembered for his other writings? These and many other questions may be answered by quotations from such authorities as Garrison, Osler Singer Sigerist Castiglioni and Sarton. The date of the first edition should be mentioned and, if *many subsequent editions or translations* appeared, that information should be added. Any details peculiar to the edition of the book being cataloged should be recorded author's correction or additions, if any additions of articles or annotations by others the name of the editor with a note of anything of interest in his connection with the work unusual facts culled from the preliminary material the latest date of the preliminary material pertinent biographic data concerning artists, printers, publishers, or other figures concerned in the compilation or publication of the volume. This seems long and complicated, but each volume presents different problems, and fortunately few require comments on all these points, while many the cataloger will find, merit none at all.

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Contents

It is well to list the contents of the volume alphabetically with the page numbers or folio numbers, so that the reader can easily find his way

of the cataloger's time is required for completing the entry. A library which owns few autograph letters would not need to have such cards printed but might have ordinary cards ruled and typed by a member of the staff. Added entries should be made for persons addressed, and if the subject matter of the letters is important enough to mention, that information should be supplied and cards made. Letters of prominent men of today may be filed away with a single card in the catalog under "Autographs" stating where the file is to be found. At a future date letters of sufficient interest may be cataloged and added to the library's other manuscript holdings. Copy books containing transcriptions of letters sent by a physician, necessary before the days of typewriters and carbon paper, should have their contents listed, and if possible added entries should be made at least for the medical men addressed in the letters. Books of recipes, case histories, diaries, daybooks, and memoranda require only the most simple cataloging. Typed papers should not be considered as manuscripts unless they have the author's corrections or additions in autograph, in which case they should then be cataloged with a note to that effect. It is important to determine whether or not any manuscript of importance has appeared in print. Unpublished material is of course more valuable and may prove worthy of editing and issuing as an article or book.

Incunabula

The cataloging of incunabula has been well treated by Stillwell in her *Incunabula and Americana* (no. 217) and medical incunabula offer no different problems. The cataloger should, however, be warned that for the ordinary reader the cards need to be as simple and brief as possible, with any supplementary information typed in a note inserted in the volume. The card catalog aims to be an index of the library's holdings, and bibliographic descriptions, references, and lengthy notes serve only to bewilder the reader. However, medical contents of a volume should be stressed. As an example, Rabanus Maurus' *De sermonum proprietate*, No. 1 in Osler's *Incunabula medica* (no. 204) contains several chapters of medical interest. Added entries must be made for any medical men connected with the volume, and the cataloger must search the preliminary material and colophon, as well as the contents, for names of men responsible for the text or the publication of the book. Stillwell offers information concerning works useful to the cataloger in finding place-names, extending contractions, etc., and Paetow's *Guide to the study of medieval history* (New York, 1931) includes works on all phases of the subject. A concise volume, still of use to the cataloger, is Robert A. Peddie's *Fifteenth century books: a guide to their identification* (London, 1913).

Books of the sixteenth seventeenth and eighteenth centuries

No further points in cataloging books of the sixteenth century need be considered than those discussed previously For many of those of the later periods the cataloging may be much simplified. The less important items, especially those published on the Continent, require no more than an ordinary catalog card, although every volume should be carefully collated by signature to determine whether or not it is complete. The more valuable works should be treated as those of the earlier years. The cataloger will find that it is not difficult to use his own judgment in deciding which books are worthy of special consideration.

Books of the nineteenth and twentieth centuries

Books printed in the nineteenth and twentieth centuries important enough to include in a collection of rare books deserve as careful analysis as those of the earlier centuries. Obviously few medical books of this period have any interest typographically so that a physical description is unnecessary but notations about the copy the importance of the text, author or editor are of no less interest because the volume is not an old one.

Americana

The cataloging of Americana does not differ from that of other works of the same periods, but the cataloger is often hampered by the lack of reference works on the subject. Few libraries can afford to purchase Sabin's invaluable bibliography even on microcards, and Charles Evans *American bibliography* is outside the scope of many Stillwell's *Incunabula and Americana* (no. 217) provides a guide to the general reference works, but it remains for some medical bibliographer to compile a work on the subject which will serve the medical library not in a position to acquire the expensive general works and will simplify the task of the cataloger who is fortunate enough to have them at hand A useful check list of American medical imprints through 1820 is being compiled by Robert Austin of the Armed Forces Medical Library Histories of medical schools and hospitals and local medical histories are of primary importance to the cataloger seeking information concerning the author or editor of the work under consideration. For obscure authors of the nineteenth century catalogs of alumni of universities or medical schools are invaluable.

Reference books

Reference books on the history of medicine should be treated as are other modern volumes. If time permits, the cataloger can make much of

the historical material more accessible by making added entries for the men whose biographies appear in the smaller biographic collections, and by analyzing collections of historical essays and chapters in histories of medicine which cover subjects not brought out in the titles of the books. Historical reprints and pamphlets should not be ignored. Articles appearing in local historical or lay journals often provide a fund of information not available elsewhere. Such papers should certainly be cataloged, and if time can be spared any historical reprints, even though listed in the indexes, deserve the cataloger's consideration, for historical and biographic articles do not go out of date with the passage of time, and readers are apt to overlook such sources when seeking biographic information.

Classification

If the rare books are kept apart from the main collection, they need no classification by subject unless the holdings are very large. In a sizable collection it may be preferable to have the manuscripts, incunabula and Americana (both books printed in America and those printed elsewhere which have American interest) separated from the other early items. Broadsides, single sheets of manuscripts, and other fragile material may be kept together and treated as pamphlets, with appropriate designations. A problem that many libraries face is the gift of a small private collection which the donor stipulates must be kept together. This should be discouraged, if possible, for as the library grows and other such groups of books are added its collection becomes separated into small units which bear little relation to each other and which may in some instances contain a duplication of material. In libraries of larger size the older volumes are sometimes arranged according to the century in which they were published. If, however, a chronologic list is made, division by period is obviated. For most such collections a simple arrangement by author is satisfactory with a few large general subjects such as anatomy, surgery, obstetrics, and herbals.

If the historical reference works are not kept with the main collection, the biographies, bibliographies, and histories may be separated into appropriate sections, but unless the large number of books demands it, no further subdivision is necessary. In a large library where it is expedient to form smaller sections, the histories may be arranged by subject in accordance with the classification in use in the library, with an appropriate symbol prefixed to the call number to indicate location in the historical part of the library. Thus, if H (for history) were selected as the symbol, and if the Dewey classification were employed, the call number for the history of anatomy would read H611. Of course any symbol other than

H may be selected as long as it makes a distinction between the historical collection and that of the main library If historical pamphlets are separately shelved the same symbol may be assigned to their numbers.

For the sake of the historian it is wise, if at all possible, to segregate the histories and the modern editions of the old texts as well as the early volumes themselves so that all the needed tools are easily available with the original sources. This also takes away the "museum" atmosphere of a rare book collection and indicates that it is for the use of the scholar rather than for the display of treasures.

Physical care

The physical care of old medical books differs in no way from that of other early volumes, and the librarian can consult such books and articles on the subject as Harry M. Lydenberg and John Archer's *The care and repair of books* (3. ed. New York, 1945) Julius Grant's *Books and documents* (London 1938) Thomas M. Iiams "Preservation of Rare Books and Manuscripts in the Huntington Library" (3) and various United States government publications. The knowledge supplied by these sources must be supplemented by the librarian's own judgment, for a glance at a collection of books, old or new often reveals that one of the worst enemies of books is the librarian himself. Ugly library stamps and scrawls in pencil or ink mutilate the title pages of books as effectively as dampness, dirt, or bookworms. Such a procedure cannot be condemned too strongly and no librarian should tolerate it. New books as well as old should be treated with respect.

A word about restrictions on the use of valuable books might not be amiss The feeling that these volumes are curiosities or treasures to be shown only on special occasions should be discarded by the librarian. Randolph G Adams (1) emphasizes the offenses of the librarian who allows his valuable possessions to be carelessly manhandled, yet the librarian who goes to the other extreme is equally at fault. Obviously he must take reasonable precautions, but he should restrict the use of his books as little as possible. Few readers will object to supervision when they are examining scarce, valuable, or fragile items, and such supervision obviates theft or mutilation. Usage outside the library should be curtailed, but surely all except those volumes which can never be replaced may on occasion be allowed to circulate through interlibrary loan with certain stipulations concerning their treatment in other libraries. Microfilms of course may be circulated instead, but some libraries do not possess reading machines, and most bookmen prefer to have the actual volume at hand while bibliographers must have them. The trend today is surely toward a more generous policy

Reference work

Reference work in the history of medicine often presents entirely different problems from those in modern medicine. Although, as in modern reference work, the bulk of inquiries are routine questions which may be answered by consulting the obvious works designed for that purpose, difficult problems require a search for obscure points through all types of volumes on all phases of the subject, including the original sources and modern editions of the early texts with their useful annotations. Any book may be regarded as a reference book by the librarian of a collection of rare books and histories, and, although it is obviously impossible to bring out on a catalog card the detailed information these books contain, the supplementary card indexes described in this chapter make much of it available. In fact, the questions which meet the cataloger are so like those that confront the reference librarian that in an historical library it is wise to have one person serve in both capacities. The cataloger's work entails intimate knowledge of the contents of the books necessary for reference work, and both cataloging and reference work demand enthusiasm for gleaning hidden facts from unexpected sources. Furthermore, familiarity with the varied types of questions asked a reference librarian shows the cataloger what information should be brought out.

It is obvious that, since such a variety of questions is submitted, only a few general types may be discussed here. Routine questions require no special consideration, for most readers are content with historical or biographic material which is easily available and care nothing for checking the facts supplied. It is for the others that the librarian must spend his time and energies, and it should not matter to him whether the reader be student or scholar, lay writer or representative of a business firm, or even an individual seeking genealogic information. Each should receive the librarian's attention, for real contributions to the history of medicine have come from all these sources, and the serious worker in any field is surely entitled to as much assistance and encouragement as the physician himself.

Perhaps the most frequent questions submitted are for biographic information. For the earliest men, Sarton's *Introduction to the history of science* (no. 50) and Chevalier's *Répertoire des sources historiques du moyen âge: biobibliographique* (Paris, 1905–07) are of incalculable assistance. The former contains brief biographies of men who lived before 1400; the latter serves as an index to biographies of the men of the Middle Ages. Mayer's "Bio-bibliography" (no. 177) will provide a much-needed source for sixteenth-century men if it is continued. If Jöcher's *Allgemeines*

Gelehrten Lexicon (Leipzig, 1750–51) and its supplements, 1784–1897 are at hand, medical men who lived before the nineteenth century neglected in other biographic collections, both general and medical may often be found. Occasionally too, Jocher aids the librarian by providing cross references from variant forms to those used by other biographers who failed to include the necessary cross references. When Jocher as well as the compilers of other biographic collections have ignored the man under consideration the librarian's problem is more time-consuming Before hunting further he may well consult any published works of the man for frequently the title page or preliminary pages will provide clues which will save him from a prolonged search. If the name of the city in which he lived occurs, local histories or local medical histories should be examined. If he made contributions to a particular phase of medicine, histories of that subject may supply facts of interest. Or perhaps biographies of his medical associates may reveal some significant data. Of course there are occasions when the librarian will be questioned about a man concerning whom little is known but the name. This fortunately happens seldom and when it does, the librarian must first try to determine the man's nationality An example of this may be seen in the process of identifying Jacobus Avienus, the "clarissimus vir" to whom Gesner addressed his letter "De montium admiratione, which appears prefixed to his *De lacte* As Gesner was a Swiss, the obvious place to seek Avienus is in a Swiss biographic dictionary but no Avienus is to be found there. A thorough inspection of Gesner's letter and the text of his *De lacte* brought to light the words, "caseus vester Glaronensis. This indicates that Avienus came from the canton of Glaris, and Simler Gesner's friend and biographer corroborates this by referring to him as "Jacobus Avienus Glaronensis." On translating the Latin Avienus into its nearest German equivalent, "Vogel, the librarian found in a Swiss biographic dictionary a prominent man of the canton of Glaris named Jakob Vogel who served as secretary of state from 1543 to 1550 There seems little doubt that he was Gesner's friend. In many cases such identification demands a search through many volumes, and there is no short cut for the librarian. It is tedious and occasionally fruitless, but every available source must be examined. The cataloger has similar problems which have been discussed earlier in this chapter

Bibliographic questions confront the librarian less frequently The answers to most of these depend on technical knowledge rather than persevering research. Inquiries concerning collations of the early volumes can be taken care of only by one who understands the physical format of such books. If the cataloger is the only one on the staff who is familiar with such problems, they should be called to his attention. Some of these problems have been discussed in the section on cataloging Questions con-

cerning editions of books and the location of copies of them often require an examination of many volumes, but for the most part they merely call for a routine search through available bibliographies and catalogs. The more difficult bibliographic problems are usually solved by the bibliographer himself with the occasional assistance of the librarian who cannot be expected to be highly trained in such a specialized field.

Medical history covering as it does many centuries and many different phases of the subject, presents the librarian with a variety of problems. One of the most frequent inquiries concerns the early description of a part or function of the body of a disease or its treatment. To assist the student in such a case, the librarian should show him first *Garrison and Morton's medical bibliography* (no. 172) and Kelly's *Encyclopedia of medical sources* (no. 175) If they fail to help, he should consult the appropriate subject in Wilhelm G Ploucquet's *Literatura medica digesta* (no. 179) Ploucquet is particularly valuable as a tool in locating early and obscure material for in this exhaustive work articles in journals are cited and, what is more important, the advisory letters and case histories in the volumes of sixteenth-century *Consilia* and *Observationes* are included. An account of some of the latter may be found in Withington (no. 326) Other subject bibliographies should be examined also, and medical histories should be used to supplement them. It is wise not to depend on the statements of historians alone, for bibliographies may provide earlier descriptions than the "firsts" alluded to by historians unable to consult all the proper sources. Occasionally Amédée Dechambre's *Dictionnaire* (no. 510) provides a bibliography of the early literature of a subject, and August Hirsch's *Handbook of geographical and historical pathology* (no. 1356) is an excellent source for references to the early literature on specific diseases. It is necessary for the serious student to examine all such material, for he cannot rely upon any one authority

Other questions often received are requests for the properties of certain medicines. This usually means dipping into the early books—pharmacopoeias, herbals, books on domestic medicine and therapeutics—for actual recipes. A reader wishing to learn the use of snakes in medicine must consult books of recipes for specific examples. Sometimes the histories must be used in conjunction with the early volumes. For instance, when a reader inquired for the exact ingredients of the "golden drops" prescribed for Louis XV the librarian turned to a short article on the illnesses of that monarch which mentioned the "gouttes du général de la Motte," with a reference to one of the many editions of Antoine Baumé's *Elémens de pharmacie* An eighteenth-century edition of that work contains under the heading "Gouttes d'or du Général de la Motte" an account of the contents of the medicine with a discussion of its qualities.

Often the librarian is asked the meaning of words which do not appear in the available dictionaries. This is particularly true of Latin words which were used occasionally in medical literature but were neglected by lexicographers. A search through the early medical texts is then necessary to find explanations of such words and phrases as the following

vena organica—jugular vein—Jacopo Berengario da Carpi, *Commentaria super anatomia Mundini* Bologna, 1521
dyapenidion—a medicine, described in the Antidotarium of Arnoldus de Villanova, which may be found in his collected works
ypoqui—*ypoquistidos*—potion of sheep's wool—*Antidotarium* of Nicolaus Salernitanus
solatrum—another name for *solanum*—nightshade—John Gerard, *The herball* London, 1597

There are many other problems concerning the practice of medicine and surgery at different times and in different places, questions about the treatment of diseases, surgical operations and technique, fees charged, medical superstitions and theories, medical education, ailments of famous personages, contemporary illustrations, and a host of small points. Some of these are found in obvious sources, while others are speedily answered if the cataloger has prepared brief card indexes of the types of material described under Supplementary Lists earlier in this chapter

Readers inquiring about the prices of early books should be referred to the published records of book auctions and the catalogs of secondhand book dealers. If the value of the items he seeks does not appear in those sources, the reference librarian should be cautious about making his own estimates. As prices vary constantly the librarian courts trouble with book dealers when he arbitrarily places a particular price upon a volume.

The student who wishes to locate copies of books in other collections may be directed to bibliographies of individuals such as those compiled by Cushing (Vesalius) Doe (Paré) Fulton (Boyle, Fracastorius, etc.) Keynes (Brown, Harvey etc.) and Le Fanu (Jenner) for these locate copies in medical and nonmedical sources throughout the world, and a list of the collections to which they refer can be used as a master list by the student. Particular mention must be made here of the extraordinary holdings of the Wellcome Historical Medical Library in London, which have been available too short a time to be cited in many of the bibliographies. Of course, the reader must be advised to search in printed catalogs of libraries before embarking upon the tedious chore of writing to those whose holdings have never been published and to those whose catalogs were published so long ago that they are out of date. Other sources

to be investigated are Stillwell, *Incunabula in American libraries a second census of fifteenth-century books owned in the United States Mexico and Canada* (New York, 1940) A. W Pollard and G R. Redgrave, *A short title catalogue of books printed in England Scotland & Ireland* (London, 1926) W W Bishop, *A checklist of American copies of "Short-title catalogue" books* (Ann Arbor 1944) Donald Wing, *Short-title catalogue of books printed in England Scotland Ireland Wales and British America 1641–1700* (New York, 1945–52) F N L. Poynter's *A catalogue of incunabula in the Wellcome Historical Medical Library* was published in London in 1954 and is to be followed by a catalog of other contents of that remarkable collection.

Works useful in an historical collection

Books which may help the librarian in medical historical research are entered in the Bibliography of this *Handbook* For the librarian who wishes only a short list of the basic reference texts on the subject, a brief selection follows which necessarily includes only those general in scope. The starred entries represent those generally most used in an historical collection. With two exceptions, nonmedical biographic and bibliographic collections are not listed. The books published in the "Clio medica and "Short History Series, added to these basic texts, would provide a small but well rounded collection for the medical historian.

Bibliographies

Ballard, J F A catalogue of the medieval and Renaissance manuscripts and incunabula in the Boston Medical Library (no. 193)
Choulant, J L. Handbuch der Bucherkunde für die ältere Medicin (no. 171)
Cushing, Harvey The Harvey Cushing collection of books and manuscripts (no. 184)
Garrison and Morton medical bibliography (no. 172)
Haller Albrecht von. Bibliotheca anatomica (no. 637)
—— Bibliotheca chirurgica (no 1785)
—— Bibliotheca medicinae practicae (no. 174)
Index Catalogue of the Library of the Surgeon General Office (no. 101)
Kelly E. C Encyclopedia of medical sources (no 175)
Klebs, A. C Incunabula scientifica et medica (no. 701)
Manget, J. J Bibliotheca scriptorum medicorum (no. 176)
*Osler Sir William. Bibliotheca Osleriana (no 157)
Ploucquet, W G Literatura medica digesta (no. 179)
Poynter F N L. A catalogue of incunabula in the Wellcome Historical Medical Library
Pritzel, G. A. Thesaurus literaturae botanicae (no. 802)
Sarton, G. A. L. Horus, guide to the history of science (no. 39)
Schullian, D M. and Sommer F E. A catalogue of incunabula (no. 206)
Weinberger B. W Dental bibliography (no. 935)

Biographies

Biographisches Lexikon (no. 220, 221)
Dechambre, Amédée. Dictionnaire encyclopédique des sciences médicales (no. 510)
Kelly H. A. A cyclopedia of American medical biography (no. 288, 289 290)
Munk, William. The roll of the Royal College of Physicians of London (no. 260)
Sarton, see under Histories.

Histories

American Psychiatric Association. One hundred years of psychiatry (no. 1517)

Arber Mrs. A. R. Herbals (no. 810)
Bick, E. M. Source book of orthopedics (no. 1325)
Bulloch, William. The history of bacteriology (no. 750)
Castiglioni, Arturo. A history of medicine (no. 308)
Choulant, J. L. History and bibliography of anatomic illustration (no 646)
Cole, F J History of comparative anatomy (no. 647)
Dobson, Jesse. Anatomical eponyms (no. 645)
Faber K. H. Nosography (no. 919)
Foster, Sir Michael. Lectures on the history of physiology (no. 1472)
Garrison, F H. Introduction to the history of medicine (no. 311)
Gordon, M. B. Aesculapius comes to the colonies (no. 441)
Gurlt, E. J Geschichte der Chirurgie (no. 1816)
Hecker J F K. The epidemics of the Middle Ages (no. 1609)
Hirsch, August. Handbook of geographical and historical pathology (no. 1356)
Keys, T E. The history of surgical anesthesia (no. 688)
Koch, C. R. E. History of dental surgery (no. 948)
Leonardo, R. A History of surgery (no. 1818)
Long, E R. A history of pathology (no. 1358)
Norwood, W F Medical education in the United States (no 994)
Nutting, M. A. and Dock, L. L. A history of nursing (no. 1228)
Packard, F R. History of medicine in the United States (no 445)
Puschmann, Theodor A history of medical education (no. 995)
—— Neuburger Max, and Pagel, Julius. Handbuch der Geschichte der Medizin (no. 317)
Ricci, J V The genealogy of gynaecology (no. 1259)
—— One hundred years of gynaecology (no. 1260)
Sarton, G. A. L. Introduction to the history of science (no. 50)
—— A history of science (no. 49)
Shryock, R. H. The development of modern medicine (no. 366)
Sigerist, H. E. American medicine (no. 449)
—— A history of medicine (no. 318)
Singer C. J The evolution of anatomy (no. 653)
—— A short history of biology (no. 778)
—— A short history of medicine (no. 325)
Stevenson, R. S. and Guthrie, Douglas. A history of oto-laryngology (no. 1342)
Weinberger B. W An introduction to the history of dentistry (no. 954)
Williams, R. C. The United States Public Health Service (no. 1605)
Willius, F A. and Dry T J A history of the heart (no. 908)
Winslow C E. A. The conquest of epidemic disease (no. 1615)
Zilboorg, Gregory and Henry G. W A history of medical psychology (no. 1531)

Translated excerpts from original sources

Clendening, Logan. Source book of medical history (no. 309)
Dennis, Wayne. Readings in the history of psychology (no. 1565)
Fulton, J F Selected readings in the history of physiology (no. 1475)
Long, E. R. Selected readings in pathology (no. 1359)
Major R. H Classic descriptions of disease (no. 1360)
Moulton, F R. and Schifferes, J J The autobiography of science (no. 48)
Willius, F A. and Keys, T E. Cardiac classics (no. 909)

Journals on the history of medicine

The most useful of the American journals on the history of medicine are *Bulletin of the History of Medicine* the organ of the American Association of the History of Medicine and the Johns Hopkins University Institute of the History of Medicine *Journal of the History of Medicine and Allied Sciences* *Annals of Medical History* (suspended November 1942) *Medical Life* (suspended July 1938) Society of Medical History of Chicago, *Bulletin* (published irregularly) Especial mention is due *Medical Classics* (publication suspended June, 1941) in which may be

found not only outstanding contributions to medicine in all ages, but also excellent biographic chronologies and bibliographies. The articles themselves appear in English and often in the original tongue as well. *Ciba Symposia* (suspended 1951) a publication of Ciba Pharmaceutical Products, contains historical articles well illustrated. Scholarly contributions on medical historical subjects often appear in journals on the history of science. The History of Science Society and the International Committee of the History of Science publish the quarterly review *Isis* interesting to the medical historian not only for frequent articles on his subject but also for reviews of current historical works and a particularly valuable annual bibliography of recent books and articles on the history and philosophy of science. The editor George Sarton, is responsible also for *Osiris* devoted to longer articles on the history of science and learning and often containing items of medical interest.

Of the many foreign journals on the subject, a number of the most useful have been suspended, including *Janus Mitteilungen zur Geschichte der Medizin der Naturwissenschaften und der Technik*, and *Studien zur Geschichte der Medizin* Currently published journals to be noted are *Aesculape* (for its illustrations rather than text) *Archives de la Société Internationale d'Histoire de la Médecine* *Berner Beiträge zur Geschichte der Medizin und der Naturwissenschaften* *Castalia* *Centaurus* *Gesnerus* *Hippocrate* *Mémoires de la Société Française d'Histoire de la Médecine et de ses Filiales* *Nova Acta Paracelsica* *Sudhoff's Archiv für Geschichte der Medizin* The Latin American countries are represented by *Anales de la Sociedad Peruana de Historia de la Medicina* *Archivos Argentinos de Historia de la Medicina* *Archivos de Historia Medica de Venezuela* *Publicaciones del Instituto de Historia de la Medicina [de la Universidad de Buenos Aires]* *Revista Argentina de Historia de la Medicina* *Revista de la Sociedad Venezolana de Historia de la Medicina.*

A new contribution of importance is *Current Work in the History of Medicine* issued from 1951 on by the Wellcome Historical Medical Library London to provide "an index to papers which have appeared in the current period."

Other journals of the history of science have excellent articles for the medical historian *Annals of Science* *Archives Internationales d'Histoire des Sciences* *Lychnos* *Revue d'Histoire des Sciences*

Exhibits

The librarian of a medical historical collection should not overlook the importance of exhibiting his holdings. Here is his opportunity to arouse general interest in medical history and personal interest in his own collec

tion Here, too, he will find an aid in furthering his own historical back ground and in determining gaps in his collection. With these aims in mind he must select a subject with which he can easily cope. He must consider the resources of his collection, the extent of his equipment for purposes of display and also the time at his disposal He should beware of general subjects extensive in scope and choose one which may be confined to narrow limits. The more definite and specific the subject the more opportunity the compiler will have of picturing the gradual development of knowledge, of telling a coherent story and of avoiding a meaningless hodgepodge of outstanding contributions which bear little relationship to each other

If the subject selected is a memorial to an eminent figure in the history of medicine, the preparation of the exhibition is comparatively easy entailing chiefly the gathering together of the important published works of the man and of any portraits, manuscripts or other personal memorabilia which the library possesses. If however a particular discovery is to be commemorated the exhibition should show a brief history of the subject prior to that discovery as well as pertinent facts relating to the author and his work. Such subjects require little of the librarian's time. There are, however occasions when he will be called upon to portray the development of knowledge in some field of medicine, necessitating many hours of research The first step, obviously is to examine available reference works. The *Index-Catalogue* (no. 104) the *Quarterly Cumulative Index Medicus* (no. 99) and the *Current List* (no. 103) give histories and historical articles which point out the general trends in the development of the subject. *Garrison and Morton's medical bibliography* (no. 172) offers the most eminent contributions. Ploucquet's *Literatura medica digesta* (no. 179) Dechambre's *Dictionnaire encyclopédique* (no. 510) and many medical bibliographies provide guides to the earliest literature and often cite obscure items omitted by the historians. Ploucquet is particularly helpful for the earlier literature and includes references to case histories in the sixteenth century clinical collections and seventeenth century scientific journals. Dechambre, more useful for the later years, often lists a detailed bibliography Kelly's *Encyclopedia of medical sources* (no. 175) is invaluable for locating references to important contributions, especially some of the hard-to-find articles of the last hundred years. This examination of histories and bibliographies should bring to light a quantity of refer ences which the librarian must trace to the original sources. This is often difficult and tedious, as historians and bibliographers are not infallible, and their references may be wrong or incomplete. Occasionally too, they misinterpret the words of an early author and attribute to him statements

he never made. Thus every passage cited must be clearly identified, and at times this necessitates a search through many articles and books written by the author in question.

In making his selections the librarian should keep in mind the fact that woodcuts, engravings, and other illustrations depict a subject more graphically than words and catch the eye of those who might otherwise pass by an exhibit. Whenever possible, it is wise to dress up the exhibit with such material. Portraits, too, may be shown for the same purpose, and if the library does not possess originals, photostats hung on the wall above the cases serve to enhance the attractions of the exhibit. It is well to remember that appearance is more important than content in attracting attention. The most scholarly display fulfills no function if it is ignored.

When a final selection of material has been made and exact references found, there remain only the arranging of the books in the cases and the inscribing of the explanatory cards. The legends on the cards should adequately cover the subject as concisely as possible. Lengthy involved explanations, descriptions of the copy and bibliographic references should be avoided, for the average reader is apt to ignore completely a card whose inscription seems forbiddingly long. In composing the text for the cards the compiler must beware the pitfall into which many historians have fallen and studiously refrain from making an unqualified claim of "first description. Too often such claims have been published only to have earlier descriptions cited by someone else.

A catalog of an exhibit, carefully prepared, and presenting material not otherwise available, should be published in pamphlet form or in a medical journal. Such a catalog is helpful not only to the historian but also to other librarians planning similar exhibits. In a published account of an exhibit the books may be more carefully described, the notes elaborated and in many instances quotations included. The librarian should consult the records of other exhibits of medical books which might serve as models for his own. Cushman D. Haagensen was responsible for "An Exhibit of Important Books, Papers, and Memorabilia Illustrating the Evolution of the Knowledge of Cancer" (2) which contains copious notes and provides an important contribution to the history of cancer. Others are John F. Fulton and Madeline E. Stanton, *The centennial of surgical anesthesia ... exhibited at the Yale Medical Library* (New York, 1946) Mayer "An Exhibition on the History of the Art of Medical Book Illustration from the 12th to the 20th Century" (7) the New York Academy of Medicine, *Catalogue of an exhibition of early and later medical Americana* (New York, 1926) the *Exhibit of books illustrating the history of military medicine* held at Duke University Hospital 1941 compiled by Henry

Schuman of New York and three catalogs published by the Historical Medical Museum of the Wellcome Research Institution *Catalogue of an exhibition of books manuscripts and relics commemorating the bicentenary of Edward Jenner* (London 1949) *Catalogue of an exhibition illustrating medicine in 1850* (London, 1950) and *Catalogue of an exhibition illustrating the medicine of the aboriginal peoples in the British Commonwealth* (London, 1952) Another catalog of interest is that prepared at the Institute of the History of Medicine, "An Exhibit on the History of Medical Historiography" (4)

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1 Adams, R. G "Librarians as enemies of books, *Library Quarterly* 7 (July 1937) 317–31

2. Hargensen, C. D An exhibit of important books, papers, and memorabilia illustrating the evolution of the knowledge of cancer *Amer J Cancer* 18 (May 1933) 42–126.

3. Iams, T M "Preservation of rare books and manuscripts in the Huntington Library *Library Quarterly* 2 (Oct., 1932) 375–86.

4. Institute of the History of Medicine. An exhibit on the history of medical historiography *Bull Hist. Med* 26 (May–June, 1952) 277–87

5. Keys, T E. "Medical works in facsimile, bibliography *Bull. Hist. Med* 27 (March–April, 1953) 133–6.

6. Klebs, A. C. "Gleanings from incunabula of science and medicine, *Bibliographical Society J America. Papers* 26 (1932) 52–88.

7 Mayer C. F An exhibition on the history of the art of medical book illustration from the 12th to the 20th century *Med Life* 43 (Dec., 1936) 590–604

8. Osler Sir William. "Some aspects of American medical bibliography *Bull. med Libr Ass.*, 1 (1902) 19–32.

9. Rosen, George. "History in medical education, *Ciba Symp.*, 11 (1951) 1,358–66.

10. Rucker M. P "On the use of old books in medical libraries, *Bull. med. Libr Ass.*, 26 (Jan., 1938) 146–50.

11 Sarton, G. A. L. "The scientific literature transmitted through the incunabula, *Osiris* 5 (1938) 41–245.

12. Schullian, D M. "Old volumes shake their vellum heads, *Bull. med Libr Ass.*, 33 (Oct., 1945) 413–48.

13. Sigerist, H. E. "The Johns Hopkins Institute of the History of Medicine during the academic year 1940–1941 *Bull Hist. Med* 10 (July 1941) 364–416.

Purpose and scope

THE OBJECTIVE OF THIS LIST is to introduce the reference material in medicine and the related sciences to medical, dental, and pharmaceutical librarians, physicians, investigators and students of medicine, nurses, pharmacists, medical technicians and any other groups who are engaged directly or indirectly in medicine and its auxiliary sciences, as well as to library school students planning to become medical librarians. In determining the content of the list, the compilers felt that it should not be directed to any particular type or size of medical library. Much important investigation is being done today in comparatively small centers. Such institutions often rely on interlibrary loans and photo reproduction services which can make material available to those who know what to request. A knowledge of reference works, therefore, is important to all librarians, and a well-selected collection of bibliographic tools is essential for the small library which is dependent on loans. Since the librarian or scientist working in a small institution this year may join the staff of a large one next year, the compilers assumed that extensive knowledge of existing works is essential for all members of the profession.

Selection has been made primarily on the basis of whether a given work has reference significance. The definition of "reference works" established by Isadore Gilbert Mudge and repeated by Constance M. Winchell in various editions of the *Guide to reference books* has been followed: books which are not "meant to be read through" but "which are meant to be consulted or referred to for some definite piece of information." In science it is, of course, not easy to make a distinction between these two groups. This list should not be regarded as complete for the medical sciences; rather the aim has been to include some of the most important works and to suggest the various types of literature available. All the titles included are not of equal importance nor are all the lists equally extensive: a fifty-page list be

comes significant as a reference tool if it imparts information difficult to find elsewhere.

It was felt to be necessary to include some scientific works of only indirect medical interest because so much of modern medical investigation has its roots in chemical and physical processes, and because botanical and zoological works frequently contain material valuable to medicine. There fore it becomes increasingly more difficult to say what is medically unimportant. Fortunately because Winchell's *Guide* gives excellent coverage of the allied subjects and includes dictionaries, directories of all types, and technological books peripheral to medicine, this list need only indicate some of the useful works to be found in that indispensable *Guide* and re mind the reader that such books can be obtained in university or large public libraries. Where works included in the first edition of the *Handbook* have been deleted, the decision was made because titles either have been superseded or have become obsolete. Prices have not been given because they fluctuate too frequently It was also impractical to try to state in every case whether or not a given work is in print. However an attempt has been made to indicate when material can be obtained free, or very reasonably When there are unusual factors, as in the case of some of the foreign publications issued since the war every effort has been made to indicate irregularities.

Books designed primarily as textbooks for students, when issued either as a single volume or in several volumes, are not included. Cecil's *Textbook of medicine* Horsley and Bigger's *Operative surgery* and Best and Taylor's *Physiological basis of medical practice* illustrate the type of textbook which has been omitted. Such books are listed in the very excellent and frequently revised selective lists of medical publications for hospital libraries cited in Chapter 5 and in many of the reference works listed in the Bibliography Selection of encyclopedias, handbooks, and extensive treatises was particularly difficult because of the modern tendency in England and America to replace the very extensive "systems" with more compact treatises. It is customary to consider textbooks as primarily manuals of instruction rather than reference tools but British authors sometimes employ the word "text book" in the titles of their reference works in a very different sense than is usual in the United States. For example, Duke Elder's *Textbook of ophthalmology* (no. 1303) is preeminently a reference work the first line of the preface states, "It has seemed anomalous that no reference text-book of ophthalmology should exist in our literature, and it is in order to make such a work available that I have written this book."

In making selections, the compilers considered chiefly the purpose for which the book was written. Extensive loose-leaf systems, such as *Tice's*

Practice of medicine (no. 518) and works covering a whole subject or field, such as Abderhalden's *Biochemisches Handlexikon* (no. 875) have been included. Inclusion and exclusion may not always seem consistent, because in certain subjects the best American reference works are compact treatises. Examples of such works are Cowdry's *Special cytology* (no. 659) and Penfield's *Cytology and cellular pathology of the nervous system* (no. 1539). Certain smaller handbooks arranged for rapid reference, for example, Lee's *Microtomist's vade mecum* (no. 1852) are also here.

The sections pertaining to early periods and the history of medicine cannot pretend to be exhaustive, since lack of space precludes the inclusion of such useful works as biographies or bibliographies of individuals, histories of individual hospitals, medical societies or schools, and other histories of limited scope such as histories of medicine in specific cities. On the other hand, many of the volumes selected do not belong to the class known technically as reference books, for as pointed out in Chapter 12, in historical reference work every book is a book of reference. Furthermore, in an historical library the casual reader must be considered. Such titles have been selected and annotated by G. L. Annan.

The closing date for entries in the Bibliography is in general October 1953. However occasional later editions and a very few 1954 and 1955 imprints have been noted.

It must be stated emphatically that this list has not been designed primarily as an acquisition list. Those who are interested in an acquisition guide for given types of libraries should consult Chapter 5. A brief list of useful reference works suggested for the average medical library may be compiled fairly easily by noting the starred references in the Bibliography: double stars indicate titles which most libraries would find essential; single stars, those usually next in desirability. It can also be utilized for suggestions to improve or augment a collection, but it contains classics and works still valuable as reference sources which may be out of print, as well as recently published books. Even the very large libraries would not expect to have everything contained here: the function of this list is to present a fairly wide selection of the existing reference works for medicine and its related fields.

Arrangement

The grouping of material differs essentially from that of the first edition where the major emphasis in arrangement was by form, e.g., bibliographies, dictionaries, directories. With constantly increasing specialization in medicine, it seems more useful, both for the librarian and the investigator, to have all the books in a subject grouped together. The arrangement

in this edition is therefore alphabetic by broad subject, except for the general introductory sections. The arrangement within each subject is by type of book: bibliographies, indexes, and abstracts; reviews; biographies; histories; encyclopedias, guides, and handbooks; directories; and dictionaries. Arrangement within each subdivision is alphabetic by author or title, whichever constitutes the main entry. No attempt has been made to list titles in their order of importance, which varies with a library's subject interest; for instance, certain works are of primary importance in a dental library that are of secondary importance in a general medical library. The reader is warned that the index must be used to find all material on any subject, since it is impractical to provide cross references between the hundreds of subjects mentioned in titles and notes.

Acknowledgments

The revision of this Bibliography has presented unusual problems for the compilers and for the editors. It has required the aid and cooperation of a number of people and institutions. We would like to express our appreciation to Frank B. Rogers, Director of the Armed Forces Medical Library, for having placed the facilities of that library at our disposal. We especially wish to thank Estelle Brodman, Assistant Librarian in charge of Reference Services, for her advice and assistance throughout the preparation of the Bibliography.

The preliminary checking of reference material in New York during the summer of 1952 was simplified by the excellent subject catalog available at the New York Academy of Medicine Library, which made this library an ideal place to work. Our thanks go to members of the Academy's library staff for the aid then given. Many other members of the library staff have had a hand in the Bibliography's preparation. Erna Russo, head of the Catalogue Department, is responsible for the uniformity of entry form. Eleanor Johnson, head of the Periodicals Department, supplied last minute information for many serial entries and assisted indefatigably in making the final copies conform to each other. Lola Szladits of the Rare Book Department checked for accuracy the entries in the historical sections. Helen Petrach, secretary to the librarian, gave meticulous secretarial help throughout. Various members of the Reference Department helped with the checking. For comments on the historical sections, particular thanks go to Madeline E. Stanton of the Yale Medical Historical Library and Walton B. McDaniel II of the College of Physicians of Philadelphia Library. Our warm thanks go to all these collaborators.

We are indebted to the members of the staff of the Vanderbilt University School of Medicine Library, and especially to Eleanor Steinke, for

aid in the preparation of the reference questions used in Chapter 11 Bernice Sally secretary to the librarian, coordinated and assisted in the preparation of the preliminary copies of the Bibliography and the final typed manuscript of Chapter 11 and her untiring work is deeply appreciated

Table of Contents for Bibliography

SCIENCE

BIBLIOGRAPHIES

Indexes abstracts reviews

SEE ALSO Medicine—Bibliographies; Science—History—Bibliographies; and bibliographies under Special Subjects, by name of subject.

Bibliographies of bibliographies and general bibliographies are important source books, and excellent annotated lists can be found in C. M. Winchell' *Guid to reference book* 7 ed. (Chicago: A. L. A., 1951 Suppl. 1 1954). A few examples are: Arnim's *Internationale Personal Bibliographie* 2. *Aufl., 1800–1943* Besterman's *A world bibliography of bibliographies* 2. *ed* *Bibliographic Index* *Index bibliographicus* *I ternational Index to Periodicals* Malclès' *Les sources d travail bibliographique* *Readers' Guide to Periodical Literature* Widmann s *Bibliographien zum deutschen Schrifttum*

In addition, the general national bibliographies often include sections on science and medicine. A few examples of these follow and Winchell' *Guide* should be consulted for others. Germany: *Deutsche wissenschaftliche Bücher 1945–1949* *Neuerscheinungen der deutschen wissenschaftlichen Literatur 1939–1945* Jugoslavia *Bibliografija Jugoslavije* U S. S R. Brookhaven National Laboratory *Guide to Russian scientific periodical literature* U.S. Library of Congress, *Monthly List of Russian Accessions.*

1

Bibliografia italiana. Rome, 1, 1928–43.

V 1 as *Bibliografia scientifico-tecnica italiana*. Published monthly by the Consiglio Nazionale delle Ricerche. Brief annotations or abstracts. Issued in sections as follows A Matematica, Fisica, Chimica, Geologia Mineralogia, Astronomia, Geofisica, Geodesia, Geografia; A. *bis*. Biologia; B. Medicina C. Ingegneria, Industria Materie Prime, Difesa Nazionale D Agricoltura.

2

Biblioteca scientifica sovietica. Rome, 1 1949+

Published by the Istituto Bibliografico Italiano. The section "Biologia medicina is extensive. Titles only in Italian translation. No indexes

3

Centre National de la Recherche Scientifique. Bulletin analytique. Paris: The Centre, .1 1940+

Pt. 1 covers the physical sciences including microscopy radio-isotopes, and chemistry; Pt. 2, the biologic sciences, bio-physics, biochemistry and biology; Pt. 3, philosophy including psychology Brief annotations. A list was published in 1948 of the periodicals received and their abbreviations. Furnished also in 12 subject sections, available separately

4

Columbia University School of Library Service. Guide to the literature of science, by Thomas P Fleming. New York. The School, 1952. 46p. Mimeographed.

Lists dictionaries, biographies, directories, serials, indexes, abstracts, literature on scientific writing, and book selection. A serial publication which supplements this and no. 12.1 is *Science Reference Notes*, prepared by the science libraries of Columbia University (1, 1954+)

5

FIAT review of German science, 1939–1946. Wiesbaden. published by the Office of Military Government for Germany, Field Information Agencies Technical, British, French, U S.; printed under the supervision of Dieterich sche Verlagsbuchhandlung, Inhaber W Klemm, 1947–48, 43v in 86.

Text in German. This same text was issued in German edition, entitled *Naturforschung und Medizin Deutschland 1939–1946* 1947–48, re-issued 1953, 83 The latter' 22,000 pages cover German scientific achievements for World War II period. Biology chemistry physics, mathematics, nd earth sciences in 1–55 (olume-numbering given only in the Germa edition); medical sciences in 56–83. V 56, Anatomy, Histology and Embryology 57–60, Physiology and Nutrition 61–63 Pharmacology and Toxicology 64–65 Bacteriology and Virus Diseases 66–68, Hygiene, Prevent and Industrial Medicine; 69 Tropical Medicine and Parasitology; 70–73, Pathology; 74–75, Internal Medicine 76, Pediatrics 77 Surgery 78–79 Obstetrics and Gynecology 80–82, Neurology; 83, Psychiatry 84, Radiology 85, Ophthalmology; 86, Laryngorhinology; 87 Dermatology and Venereal Diseases 88 Orthopedics. Volumes can be purchased separately Direct

inquiries to the Office of Military Government for Germany (U S.) Economics Division, Research Control Branch, Berlin, Germany APO 42 U.S. Army

An English translation is being issued, entitled *American FIAT review | German science 1939–1946* (1950+) 90v by the O. W Leibiger Research Laboratories, Petersburg, New York. This contains two more volumes than the German edition v 89–90, Ferrous Metallurgy Parts I–II While it is expected that the entire set will eventually be published—most of the books have already been translated—the only volumes available so far are: 5 Applied Mathematics, III 12, Physics of the Electron Shells 33 General Metallurgy 34–35 Theoretical Organic Chemistry Parts I–II

5 1

Hawkins, Reginald R ed. Scientific, medical and technical books published in the United States of America. 1930–1944 a selected list of titles in print New York Bowker 1946. 1114p Suppl 1 Books published 1945–1948 Washington, 1950 514p. Suppl. 2, Books published 1949–1952 Washington, 1953. 579p.

An exceedingly useful list of about 10,500 of the outstanding American publications with descriptive annotations. Extensive sections on medicine and allied sciences.

6

International Catalogue of Scientific Literature London 1–14 annual issues, 1901–16 (published 1902–21)

Published for the International Council of Scientific Workers by the Royal Society of London. Continues the *Catalogue of Scientific Paper* (no. 8) Of 17 sections, A–R, those of interest to medicine are: D Chemistry L General Biology M Botany N Zoology O Human Anatomy P Physical Anthropology Q Physiology R Bacteriology

6.1

National Research Council of Egypt. Classified list of Egyptian scientific papers Cairo {The Council(?)} 1 1951+

An annual listing of the research papers and dissertations published in Egypt and by Egyptians abroad. Egyptian periodicals covered are listed Arabic titles translated

7

Reuss, Jeremias D *Repertorium commentationum a societatibus litterariis editarum* Göttingen Dieterich, 1801 21 16v

Contents v 1 natural history (general) and zoology 2, botany and mineralogy 3 chemistry 4, physics 10–16, science and medicine. A subject index to scientific society publications through the eighteenth century With author index at end of v 2, 3, 4 15 16, and subject index at front of each volume. Consult Callisen (no. 88) v 16, p. 7 for detailed citation of contents of volumes on medicine.

8

Royal Society of London. Catalogue of Scientific Papers. London: Clay 1867–1902 Cambridge: Univ Pr 1914–25. 19v V 1–6, ser 1 1800–63 v.7–8, ser 2, 1864–73 v.9–11, ser 3 1874–83 v 12, supplementary ; 13–19 ser 4 1884–1900.

An author index of periodical literature. Unfortunately the subject index for medicine was never published. Continued in the *International Catalogue* (no. 6)

9

Svenska Institutet for Kulturellt Utbyte med Utlandet, Stockholm. Swedish books and publications on science, medicine and the humanities, 1939–1947 Stockholm. Swedish Institute, [1949] 199p.

Prepared by Gösta Ottervik and Sten G. Lindberg Arranged by subject, no index.

10

United Nations Educational Scientific, and Cultural Organization Science Cooperation Office (Latin America) List of scientific papers published in Latin America. Montevideo 1 1948+

Includes biology chemistry and biochemistry and the medical sciences. List of journals covered arranged by country Incomplete, including only articles contributed to the Office.

11

——Science Cooperation Office (Middle East) List of scientific papers published in the Middle East (Afghanistan, Cyprus, Egypt, Iran, Iraq, Israel, Lebanon, Pakistan, Sudan, Syria, and Turkey) Cairo, no 1 1947+ Free.

With annotations or abstracts in French or English Extensive section on medicine Lists periodicals by country Irregular Author list for no. 1–6 1947 50, December 1951

12

——Science Cooperation Office (South Asia) Bibliography of scientific publications of South Asia (India, Burma, Ceylon) Delhi, India, no 1 1949+ Free.

Extensive section on medicine. No 6, December 1951 has descriptive list of South Asian serials.

12.1

University of Illinois Library School. Science

reference sources a selected list of titles for use in Library Science 412 by Frances Briggs Jenkins. Champaign, Ill. Illini Union Bookstore, [1954] 90 leaves. Mimeographed.

Similar to no. 4, but includes in addition titles in psychology engineering, agriculture nd medicine.

SEE ALSO *British Abstracts* (no 835)

SEE ALSO abstract, review or bibliographic section of: *College and Research Libraries* sections on "Current reference aids" and "Recent literature on higher education"; *Experientia Ricerca scientifica, Science Progress.*

Lists of periodicals

General works serving as sources for medical material can be found in Winchell *Guide* Examples are the Royal Society Abstracting Services Consultative Committee's *List of periodicals and bulletins containing abstracts published in Great Britain 2. ed* and *Ulrich periodicals directory 7 ed.*

13

Australia. Council for Scientific and Industrial Research. Catalogue of the scientific and technical periodicals in the libraries of Australia; ed. by Ernest R. Pitt. Melbourne Green, 1930 1,208p. Suppl., 1928–1933. 1934. 453p.

Union list of periodicals, publications of institutions, societies, international congresses, and government departments. 35,000 entries. Lists 132 cooperating libraries. Inclusion of municipal publications is particularly noteworthy since these are omitted from Winifred Gregory *List of the serial publications of foreign governments 1815–1931*

14

Bolton Henry C A catalogue of scientific and technical periodicals, 1665–1895 together with chronological tables and a library check-list. 2. ed. Washington: Govt. Print Off 1897 1,247p. (Smithsonian miscellaneous collections, 40.)

Lists 8,603 periodicals with subject index. Another list of serials, 1633–1876, is Samuel H Scudder *Catalogue of scientific serials of all countries* (Cambridge: Harvard Univ 1879)

15

Consiglio Nazionale delle Ricerche. Periodici italiani scientifici, tecnici, d' cultura generale. 5 ed Roma. Arte Grafiche Trinacria, 1939. 3v

Descriptive bibliography of Italian periodicals, scientific, technical, and general. Includes government serial publications Imports t annuals, geographic classification of the journals, classified subject list, "Medicina, including some 270 titles.

16

Inventaire des périodiques scientifiques des bibliothèques de Paris, dressé par Léon Bultingaire. Paris: Masson, 1924–29 1 102p and suppl., 283p.

A union list issued by the Académie des Sciences de l'Institut de France. Geographic and subject index. A history of the serial is included and also list of the medical and scientific libraries of Paris. Especially useful for French journals.

17

Japan Ministry of Education. Higher Education and Science Bureau. Scientific Information Section. List of scientific periodicals published in Japan. Tokyo: Association for Science Documents Information, 1953+ Processed.

Section on "Natural sciences" includes medicine, of which there are over 100 titles in first issue. Agriculture, biology and chemistry also are included. Language of the text is indicated if other than Japanese Many titles seem to have been translated into English, so that identification is not always certain.

18

New Serial Titles, Union List of Serials Newly Received by North American Libraries. Washington, 1 1953+

Information supplements the *Union list of serials* (no. 22) Holdings given as in the *Union list of serials.* Sponsored by the Joint Committee on the *Union list of serials* and published by the Library of Congress. Supersedes *Serial Titles Newly Received.* Monthly with six-month nd annual cumulations available separately Publishers addresses and prices often included.

19

Royal Society of London Catalogue of the periodical publications in the library London. Oxford Univ Pr 1912. 455p.

Lists 1,811 journals. Includes publications of foreign scientific societies. Limited in scope. See the Society *Catalogue of Scientific Papers* (no. 8) 1 and v 12, for lists of periodicals indexed.

20

——Information Services Committee. A list of British scientific publications reporting original work or critical reviews. London Cambridge Univ Pr [1950] 95p

Current journals arranged by publishing organization. Content, physical characteristics, price, editors, and addresses.

21

Special Libraries Association. Union list of technical periodicals in two hundred libraries of the Science-Technology Group of the Association; comp. by Elizabeth G. Bowerman. 3. ed. New York. The Association, 1947 285p. Processed.

Lists holdings of these libraries.

22 * *

Union list of serials in libraries of the United States and Canada. 2. ed. Ed. by Winifred Gregory and an Advisory Committee appointed by the American Library Association. New York. Wilson, 1943. 3,052p.

Over 650 libraries have cooperated in preparing the 120,000 titles included. This monumental work, the most important of the periodical bibliographies, is basic necessity in every large library. The second edition entirely supersedes the first edition and its two supplements, which covered entries through 1931.

22a

—— Supplement 1. January 1941—December 1943. New York. Wilson, 1945. 1,123p.

22b

—— Supplement 2. January 1944—December 1949. New York. Wilson, 1953. 1,365p.

The functions of the *Union list of serials* are continued in *New Serial Titles* (no. 18).

23

United Nations Educational, Scientific, and Cultural Organization. Department of Natural Sciences. List[ ] of scientific periodicals published. Paris, 1952+. Processed.

Those already published are: New Zealand (280/2105) 1951; India (280/2625) 1952; Denmark (280/2N15) 1952. Others in preparation. All contain many medical titles.

24

U.S. Department of Agriculture. Library. List of serials currently received. November 1, 1949 comp. by Katharine Jacobs. Washington. Govt. Print. Off., 1950. 349p. (U.S. Dept. Agriculture, Library. Bibliographical Bulletin no. 12.) Suppl. 1 March, 1953. 18p.

Chiefly useful as guide to the material frequently not available in medical libraries which this Library can film, photoprint, or lend. Earlier editions issued in 1901, 1922, and 1936. Supplement compiled by Ethel L. Coon.

25

World list of scientific periodicals, published in the years, 1900–1950. Third edition by William A. Smith, Francis L. Kent, and George B. Stratton. London. Butterworths' Scientific Publications, 1952. 1,058p.

Over 50,000 titles listed showing location in 247 British libraries. No journals are included which did not survive until 1900. Gives only title, abbreviation, and place of publication, therefore less useful than *Union list* (no. 22). Only natural sciences included, economic and social sciences omitted. "Periodic International Congresses," p.1,042–58 lists dates and places of meetings, with subject index. SEE ALSO *Union catalogue of the periodical publications in the university libraries of the British Isles* compiled by Marion G. Roupell in 1937 which lists titles not included in the *World list*.

SEE ALSO *Biological Abstracts* "Journals covered" (no. 768); *Chemical Abstracts* "List of periodicals" (no. 837); *Periodica chimica* (no. 845); UNESCO *Scientific institutions and scientists in Latin-America* (no. 65); also lists of periodicals under General Medicine (no. 141–62 and 180–83) and under Special Subjects, by name of subject.

BIOGRAPHIES

General

Often general biographic directories contain information on medical individuals. Winchell's *Guide* contains good lists of these, a few examples of which are: *Biography Index*; *International who's who*; *Who's who in Central and East-Europe*; *Who's who in Latin America*; *Who's who in science international*; *World biography*.

26

Chambers' dictionary of scientists; ed. by A. V. Howard. London. Chambers, [1952] 499 columns. Reprint of 1951 edition.

Includes accounts of many physicians; has useful subject index and list of Nobel laureates.

27

Jöcher, Christian Gottlieb. Allgemeines Gelehrten-Lexicon. Leipzig: J. F. Gleditsch, 1750–51. 4v. Fortsetzung und Ergänzungen ... A-Romuleus. Leipzig: J. F. Gleditsch, 1784–87; Delmenhorst: G. Jöntzen, 1810; Bremen: J. G. Heyse, 1813–19; Leipzig: Selbstverlag der Deutschen Gesellschaft, 1897. 7v. (V.1–2 by J. C. Adelung; 3–6 by H. W. Rotermund; 7 by Otto Günther.)

Very useful for locating obscure early men. Brief biographies include dates of birth

and death and outstanding writings. Good cross references for variant forms of names.

28

Nobel Foundation. Nobel the man and his prizes. Stockholm. Sohlmans Förlag, 1950. 620p.

By Henrik Schück and others. Medical prizes, p. 135–316. Tables of prize winners, p. 605–07. A list of these is also found in the *World Almanac*. See also T. W. MacCallum and Stephen Taylor's *The Nobel prize winners 1901–37* (Zurich, 1938) and *Prix Nobel*, 1901+. Official publication of the Foundation.

29

Poggendorff, Johann. Biographisch-literarisches Handwörterbuch für Mathematik, Astronomie, Physik mit Geophysik, Chemie, Kristallographie und verwandte Wissensgebiete. Berlin. Verlag Chemie, 1 1863+

Periods covered: v. 1–2, 1858–63; 3, 1858–83; v. 4, 1883–1904; 5, 1904–22; 6, 1923–31. Standard source for all countries and periods. V. 6 useful for contemporary scientists, including some in biology. Birth date, bibliographies, and professional data included. V. 6, pt. 1, A–E, and pt. 2, F–K, appeared in 1936; pt. 3, L–R, in 1938; pt. 4, S–Z, in 1940. V. 7 announced.

30

Rockefeller Foundation. Directory of fellowship awards for the years 1917–1950. New York. [The Foundation, 1951] 286p.

Alphabetic and geographic lists, subdivided by field of interest. Of the total 6,342 fellowships, 3,829 were awarded in medicine, public health, and nursing.

30.1

Who's who in British science, 1953. London. Leonard Hill, [1953] 292p.

First edition. List of workers in all fields of science, pure and applied, and in all countries of the British Commonwealth. Educational and professional information.

National

Winchell's *Guide* has a detailed list of national biographic directories by country; some are among our best sources for medical biographies. A few of the most useful ones are: *American women*; *Canadian who's who*; *Directory of American scholars*; *Who's who*; *Who was who*; *Who's who in America*; *Who's who in the East*; *Who's who in the Midwest*; *Who's who in the South and Southwest*; *Who's who on the Pacific Coast*; *Who was who in America*. Similar publications exist for other countries as well, such as *Wer ist wer* (Germany); *Vem är det* (Sweden); and UNESCO's *Scientific institutions and scientists in Latin America* (no. 65)

France

31

Institut de France. Académie des Sciences. Annuaire. Paris, 1917+

Each volume contains chronologic lists of members, correspondents, etc., from 1795 on; also a cumulative "Addenda" to the Institut's *Index biographique* (no. 32). Many medical men included. List of prizes and foundations.

32

——— Index biographique des membres et correspondants de l'Académie des Sciences de 1666 à 1939. Paris. Gauthier-Villars, 1939. 477p.

Brief biographies stressing academic achievements. Many medical men included. Memorabilia in possession of the Académie are noted. It is revised and brought up to date by the cumulative "Addenda à l'Index biographique" in each volume of the Académie's *Annuaire* (no. 31)

Germany

33

Kürschners deutscher Gelehrten-Kalender. Berlin. W. de Gruyter, 1 1925+

Brief biographies with bibliographies of living German scholars in the nonliterary fields, including physicians. The last edition is the eighth, 1954. Has useful subject index, list of those deceased, and list of Nobel prize winners in science from Germany, Austria, and Switzerland.

Great Britain

A list of 1,255 directories is furnished by *Current British Directories 1953* (London. Sarples Pr. [1953(?)]). Beginning in 1952 and issued annually, this covers "local, trade and professional directories of the British Isles," among which are numerous medical and allied scientific entries.

34

Royal Society of London. Obituary notices of fellows of the Royal Society. London, 1 1932+

Annual. Continues "Obituary notices" formerly published in the Society's *Proceedings* yearly before 1860, irregularly 1860–99 and 1905–32. Those for 1898–1904 were cumulated from the Society's *Yearbook* with index to all previous notices, to form 75 of the *Proceedings*. Notices vary in

length, frequently have portraits, and give personal and professional information.

SEE ALSO *Who's who in British science* (no. 30.1)

United States

35

American Association for the Advancement of Science. A brief history of the Association from its founding in 1848 to 1948. Its present organization and operation. Summarized Proceedings for the period from January 1940 to January 1948, and a directory of members as of December 31st 1947. Washington: The Association, 1948. 1,219p.

36 ★

American men of science: biographical directory. Ed. by Jaques Cattell. 9 ed. Lancaster, Pa.: Science Pr., 1955. 3v.

Excellent for contemporary scientists including the biologic sciences other than clinical. Professional but no personal data given. V. 1, Physical Sciences; v. 2, Biological Sciences; v. 3, Social Sciences. An interesting study of backgrounds and developmental influences of some of the scientists included was made by Stephen S. Visher: *Scientists starred in 1903–1943 in American men of science* (Baltimore: Johns Hopkins Pr., 1947) 556p.

37

National Academy of Sciences. Biographical Memoirs. Washington, 1, 1877+

Biographies of deceased members, with their bibliographies.

HISTORY OF SCIENCE

Bibliographies, indexes, abstracts

38

John Crerar Library. A list of books on the history of science. Prepared by A. G. S. Josephson. Chicago: The Library, 1911. 297p. Suppl. 1917. 139p.

Includes articles in periodicals. Consult Winchell for further information.

39

Sarton, George A. L. Horus, a guide to the history of science. Waltham, Mass.: Chronica Botanica, 1952. 316p.

Necessary volume in any historical medical collection. Introductory essays on science and tradition, followed by bibliography of all phases of the history of science: reference works; histories of special countries, in cultural groups, of special subjects; journals and serials (with the help of C. F. Mayer); national and international organizations; teaching institutions; institutes; museums; libraries; international congresses.

Histories

40

Butterfield, Herbert. The origins of modern science, 1300–1800. New York: Macmillan, 1951. 187p.

This brief survey has been called the best book so far in the field. With bibliography.

41

Cohen, Morris R., and Drabkin, Israel E., eds. A source book in Greek science. New York: McGraw-Hill, 1948. 579p. (Source books in the history of the sciences.)

Excellent collection of translated excerpts arranged by subject. Extensive chapters on biology, medicine, and physiologic psychology. With bibliography.

42

Crombie, Alistair C. Augustine to Galileo: the history of science A.D. 400–1650. [London] Falcon, [1952] 436p.

Excellent, readable, with lengthy bibliography.

43

Dampier-Whetham, Sir William C. D. A history of science, and its relations with philosophy. 4 ed. rev. and enl. New York: Macmillan, 1949. 527p.

General survey.

44

Dingle, Herbert, ed. A century of science, 1851–1951. London: Hutchinson Scientific and Technical Publications, 1951. 338p.

Chapters by different authors on: physical, chemical, and astronomical subjects; organic evolution; coming of man; progress of *homo sapiens*; genetics and embryology; physiology and histology; biochemistry; medicine; surgery and their scientific development; general psychology; medical psychology.

45

Haldane, John S. The sciences and philosophy. Garden City, N.Y.: Doubleday, 1929. 530p.

Devoted particularly to biology and psychology.

46

Haskins, Charles H. Studies in the history of mediaeval science. 2. ed. Cambridge: Harvard Univ. Pr., 1927. 411p.

Excellent study with useful chapters on the translators from the Arabic in Spain, Sicilian and Italian translators of the twelfth century, science at the court of Frederick II,

Michael Scot, and list of textbooks from the close of the twelfth century

47

Mees, Charles E. K. The path of science, with the co-operation of John R. Baker New York: Wiley [1948] 250p.

The chapter on the growth of biologic ideas written by Baker Chiefly about science and its relation to the history of society

48

Moulton, Forest R., and Schifferes, Justus J eds. The autobiography of science. New York Doubleday Doran, 1945. 666p.

Excerpts from writers from Biblical times through Harvey Cushing. Includes: Hippocrates, Aristotle, Galen, Guy de Chauliac, the *Regimen* of Salerno, Leonardo, Paracelsus, Fracastoro, Gesner Paré, Vesalius, Harvey Gilbert, Leeuwenhoek, William Petty Fauchard, Linnaeus, Lavoisier Morton, Schwann, William James, Pasteur Lister Nightingale, Sedgwick, Roentgen, Curie, Freud, Osler Cannon, Cushing, and others of interest to medicine.

49

Sarton, George A. L. A history of science. Cambridge: Harvard Univ Pr., 1952. 646p.

The first of eight volumes of projected history V 1 Ancient science through the golden age of Greece: pt. 1, Oriental and Greek origins; pt. 2, the fifth century B.C., with chapters on Greek medicine and the Hippocratic corpus; pt. 3, the fourth century B.C., with chapter on the natural sciences and medicine. Scholarly and readable, necessary volume in any historical collection.

50

—— Introduction to the history of science Baltimore: Williams & Wilkins, [1927] 1948. 3v in 5 (Published for the Carnegie Institution of Washington.)

Exhaustive history through 1400, with biographic sketches, notes on editions and translations of texts, references to critical works concerning them. Necessary in any medical historical collection.

51

Sedgwick, William T and Tyler Harry W A short history of science, rev by H. W Tyler and R P Bigelow New York Macmillan, 1939 512p

A useful history with chronology and bibliographic references

52

Singer Charles J A short history of science to the nineteenth century Oxford Clarendon Pr 1941 399p.

Chronologic history including the nineteenth century "It considers both physical and biological, but not psychological, social, or abstract mathematical problems.

53

Singer Charles J ed. Studies in the history and method of science. Oxford Clarendon Pr 1917 21 2v

An excellent collection of articles by various authors on special subjects in the history of science, chiefly medicine. More expensive than its limited use warrants.

54

Taylor Frank S. A short history of science and scientific thought with readings from the great scientists from the Babylonians to Einstein. New York: Norton, [1949] 368p.

English edition has title: *Science past and present.* Illustrated history with translated excerpts.

55

Thorndike, Lynn. A history of magic and experimental science. V 1–2 New York Macmillan, 1923. V.3–4 New York Columbia Univ Pr., 1934–41.

Detailed and scholarly study through the sixteenth century Valuable for any medical historical collection.

56

Wightman, William P. D The growth of scientific ideas. New Haven Yale Univ Pr 1951. 495p

A study of the development of few dominant ideas. In two parts: matter and motion nature and life. With bibliography and chronology

HISTORIES OF SOCIETIES

57

Bates, Ralph S. Scientific societies in the United States. New York: Wiley [1945] 246p. (Publication of the Technology Press, Massachusetts Institute of Technology)

Chapters on eighteenth-century America national growth, 1800–65; triumph of specialization, 1866–1918 American scientific societies and world science, 1919–44 With lengthy bibliography

58

Brown, Harcourt. Scientific organizations in seventeenth century France (1620–1680) Baltimore: Williams & Wilkins 1934. 306p. (History of Science Society Publications, new ser., no. 5)

Useful and scholarly work, with bibliography

59

Italy Ministero dell' Educazione Nazionale

Direzione Generale delle Accademie, delle Biblioteche, degli Affari Generali e del Personale. Accademie e Istituti di cultura. Roma Palombi, [1938] 943p.

Contains brief histories of scientific societies, including many medical organizations.

60

Ornstein, Martha. The rôle of scientific societies in the seventeenth century [3. ed.] Chicago Univ of Chicago Pr [1938] 308p. (History of medicine series, issued under the auspices of the Library of the New York Academy of Medicine, no. 6.)

Useful for histories of organizations and their publications.

DIRECTORIES OF ORGANIZATIONS

Of recent years the number of international organizations and societies has been rapidly increasing. Among the general works concerning them, useful ones for the medical field are the League of Nations' *Handbook of international organizations* and Lyman C. White's *International non-governmental organizations*.

61

Directory of international scientific organizations. [Rev ed.] Paris UNESCO, [1952] 217p.

Grouped as basic sciences, applied sciences (including medicine) and miscellaneous. Detailed information.

62 * *

National Research Council. Handbook of scientific and technical societies and institutions of the United States and Canada. 5 ed. Washington The Council, [1948] 371p.

United States section compiled by Callie Hull and Mildred Paddock; Canadian section compiled for the National Research Council of Canada by S. J. Cook and J. R. Kohr. Full information given. Includes medical societies.

63

Pan American Sanitary Bureau. Scientific institutions in Latin America. Washington. The Bureau, 1941–45 214p. (Publication no 160.)

Covers 20 institutions of medical or biologic nature. Brief description includes history, organization, plant, and activities, with illustrations.

64

Scientific and learned societies of Great Britain handbook compiled from official sources. 57 ed. London: Allen & U win, 1951.

Formerly *The official year-book of the scientific and learned societies of Great Britain and Ireland*. Comprehensive section on biologic and medical societies.

65

United Nations Educational, Scientific, and Cultural Organization. Centro de Cooperación Científica para América Latina. Scientific institutions and scientists in Latin America. Institutions scientifiques et hommes de science latino-américains. Instituciones científicas y científicos latino-americanos. Montevideo The Centro, 1949+ Processed.

Uruguay 1 (1949) 75p.; Argentina, 1 (1949) 222p. Puerto Rico y Colombia, 1 (1949) 30+35p.; Brasil, v 1 (1950) 139p.; Brasil, v 2 (1950) 305p., Argentina, v 2 (1950) 103p.; Bolivia, v 1 (1950) 99p., México, 1 (1950) 214p.; Venezuela, 1 (1951) 131p. Chile, v 1 (1951) 177p. Brasil, 3 (1951) 230p., Perú, v 1 (1951) 105p. Argentina, 3 (1952) 150p.; Ecuador v 1 (1952) 74p. Cuba, 1 (1953) 96p. Uruguay v 2 (1953) 259p. Includes medical and allied sciences. Institutions, societies, and scientists arranged by name, with descriptive and professional biographic data. From 1951 has index to scientists' fields of interest.

66

Yearbook of International Organizations, 1951–52. (Annuaire des organisations internationales.) 4. ed. Brussels: Union of International Associations, [1951] 1,229p.

Includes outline of United Nations, its national commissions, and its specialized agencies. Has sections on medicine, relief, social rehabilitation, insurance, and welfare.

SEE ALSO Medicine—Directories of organizations, p.403 and no. 520–22.

DICTIONARIES

General language dictionaries, English and other languages, together with many of the general technological works, can be found in the excellent lists furnished by Winchell's *Guide*. A few of the recent technical dictionaries have been included here to serve when specialist dictionaries are lacking. Other helpful general guides are: J. E. Holmstrom's *Bibliography of interlingual scientific and technical dictionaries* 2. ed. U.S. Library of Congress' *Foreign language—English dictionaries* and G. F. Von Ostermann *Manual of foreign languages for use of librarians bibliographers research workers editors translators and printers* 4. ed.

National

English

67

Chambers' technical dictionary; comprising terms used in pure and applied science, medicine, the chief manufacturing industries, engineering, construction, the mechanic trades; with definitions by recognized authorities. Ed. by C. F. Tweney and L. E. C. Hughes. Rev. ed. with suppl. New York: Macmillan, 1948. 976p.

Good definitions. Useful tables outlining the various orders of the animal, vegetable, and mineral kingdoms.

68

Hough, John N. Scientific terminology. New York, Rinehart, [1953] 231p.

Chapters on medical, pathologic, bacteriologic, pharmaceutical and biologic terms. Discusses the formation of words and the Linnaean system of nomenclature.

SEE ALSO Henderson (no. 782)

French

69 *

De Vries, Louis. French-English science dictionary for students in agricultural, biological and physical sciences. 2. ed. New York: McGraw-Hill, 1951. 596p.

P.535–84 covers terms used in aeronautics, radar, electronics, radio, and television.

German

70

De Vries, Louis. German-English science dictionary for students in chemistry, physics, biology, agriculture, and related sciences. 2. ed. New York: McGraw-Hill, 1946. 558p.

Emphasis on natural sciences. Useful for translating, not for description. Modern and quite comprehensive.

71

Haltenhoff, A. G. Science German course: graduated readings, specially prepared, on mathematics, chemistry, physics, geology, zoology, botany, physiology. 4. ed. London: Hachette, [1939] 376p.

Not a dictionary in the ordinary sense, but has excellent German vocabulary p.265–376.

72

Leibiger, O. W. and Leibiger, Irma S. German-English and English-German dictionary for scientists, comprising chemistry, physics, mathematics, engineering, aeronautics, dynamics, biology, physiology, medicine, and other sciences. Ann Arbor, Mich.: Edwards, 1950. 381+360p. Processed.

Product of the O. W. Leibiger Research Laboratories.

Portuguese

73

Beadnell, Charles M. Dicionário de termos científicos, tal como são usados nas diferentes ciências. Lisboa: Livraria Sá da Costa, 1945. 357p.

Translation into Portuguese of English revised ed., 1942.

Russian

74

Callaham, Ludmilla I. Russian-English technical and chemical dictionary. New York: Wiley, [1947] 794p.

Includes Russian alphabet with transliteration and short list of abbreviations.

75

Perry, James W. Scientific Russian. New York: Interscience Publishers, 1950. 816p.

A practical aid to a reading knowledge of scientific Russian. Includes basic grammar, reading exercises, and vocabulary in Russian and English. Author has a similar book on chemistry.

SEE ALSO Medicine—Dictionaries and studies of terminology (no. 528–615); and under Special Subjects, by name of subject.

GOVERNMENT DOCUMENTS

INTERNATIONAL

In addition to the following entry, librarians will be thankful for several recent guides to the publications of the United Nations and its predecessor, the League of Nations: Hans Aufricht' *Guide to League of Nations publications*; Moor and Chamberlin's *How to use United Nations documents*; and the serial, *United Nations Documents Index*. Further details can be found in Winchell's *Guide*.

76

Carroll, Marie J. Key to League of Nations documents placed on public sale 1920–29. Boston: World Peace Foundation, 1930.

340p Supplements 1–4 (covering 1930–36) 1931–38.

A complete record of the League of Nations publications, arranged chronologically and within each year classified by subjects. Has sections on health, social welfare, and traffic in drugs. Chart of the League organization. With the League of Nations *Publications issued by the League of Nations* (Geneva. The League, 1935) 317p and Supplements 1–5 1935–45 it forms the most complete record available.

UNITED STATES

Few publications offer so many problems to the librarian and bibliographer as the public documents of the United States. A knowledge of the general guides is very helpful R. R. Bowker's *State publications* (New York Publishers Weekly 1899–1909) 4v A. M. Boyd's *United States government publications* L. F Schmeckebier' *Government publications and their use* U S. Documents Office' *Catalog of the public documents of Congress and of all departments of the government of the United States 1893–1940* U S Documents Office *Checklist of United States public documents 1789–1909* U S. Documents Office *United States Government Publications Monthly Catalog* and the U S. Library of Congress Division of Documents' *Monthly Checklist of State Publications* Further details can be found in Winchell' *Guide*

77

U.S. Documents Office. Diseases, contagious and infectious diseases, sickness, and vital statistics. 4. ed. Washington Govt. Print Off., August, 1952. 25p. (Price list 51A.)

This and the following entry were formerly issued as U.S. Documents Office, *Health disease drug and sanitation list of publications for sale* Revised frequently and available at small cost.

78

—— Health, hygiene, drugs, and sanitation. 41 ed. Washington Govt. Print Off September 1952. 29p. (Price list 51)

OTHER COUNTRIES

The few checklists available for foreign government documents are given in Winchell' *Guide* A few selections from these and others are Canada, Department of Public Printing and Stationery Division of Documents, *Annual catalogue government publications* (Ottawa, 1928-) J. B. Childs *Government document bibliography in the United States and elsewhere* Great Britain, Stationery Office, *Government publications consolidated list* and *List of the serial publications of foreign governments 1815–1931* ed by Winifred Gregory

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MEDICINE

BIBLIOGRAPHIES

Guides to literature

The group of bibliographies which follows furnishes extensive lists of medical works, but it does not attempt to be exhaustive Additional information will be found under Science—Bibliographies and in Winchell' *Guide* Several shorter lists, useful to small libraries, are given in the American College of Surgeons' "The hospital medical library *Bull. Amer Coll. Surg* 40 (July/Aug 1955) 225–67 the American Medical Association *Hospital medical library suggestions* (no. 83) Charlotte Kenton "Reference tools for hospital medical libraries, *Bull. Med Libr As* 40 (Oct., 1952) 369–80- and the Special Libraries Association *Technical bibliographies* (no. 1141)

79 * * *

Columbia University School of Library Service. Guide to the literature of the medical sciences for use in connection with Library Service 220B. Prepared by Thomas P Fleming preliminary edition. New York: The School, 1953 131p. Processed.

A revision of Estelle Brodman *Bibliographical lists for medical libraries* 2. ed., 1949–51 Includes journals, monographs, textbooks, etc. Has few annotations but no index.

80

Hahn, Alfred A La Bibliothèque de la Faculté de Médecine de Paris Suivi d'un index complémentaire de bibliographie médicale. Paris Le François, 1929 250p. (Thesis.)

Lists principal bibliographic works in that library Includes handbooks, extensive sys-

tems, encyclopedic dictionaries, biographic and historical works and a history of the library

81

Kricker Gottfried. Die Schrifttumsnachweise der Medizin; Übersicht über Handbücher Bibliographien, Referatenblätter und sonstige Literaturquellen. 3. Aufl. Leipzig: Barth, 1944 105p.

Arranged under subject, subdivided into "Handbücher" histories, bibliographies, and journals. No author index. German literature is well covered but not that of other countries.

Indexes and abstract journals

82

Abstracts of World Medicine. London, 1 1947+

Selective abstracts. Classed arrangement Titles of foreign articles are translated. *Abstracts of World Surgery* merged with this in July 1952.

83

American Medical Association. Council on Medical Education and Hospitals. Hospital medical library suggestions. Chicago The Association, 1954 18p.

A list of periodicals and monographs suitable for small library

84

Archiv für medizinische Literatur Berlin, 1951+

Published by Arbeitsgemeinschaft Medizinischer Verlage. International bibliography arranged by subject; on perforated sheets for clipping or mounting. All titles and annotations are in German with no indication that some titles are translated

85

Bibliographia medica (Index medicus) Paris, 1–3, 1900–02.

Published by the Institut de Bibliographie. Arrangement somewhat similar to the *Index Medicus* (no. 92) covering period when latter was suspended, but it is neither as comprehensive nor as accurate. Considering its high price and limited usefulness, it is a luxury for most libraries.

86

Bollettino bibliografico. Milano, 1 1946+

Title also in French, English, German, and Spanish. Published by the Internazionale Associazione of Medical Press. Lists various current medical books, but does not index articles. Free to editors of medical reviews. Includes some information about periodicals and congresses. Irregular

87

British Abstracts of Medical Sciences. London, v.1 1954+

Selective abstracts. It replaces Section *A III* of *British Abstracts* (no. 835) Issued monthly

88

Callisen, Adolph C. P Medicinisches Schriftsteller-Lexicon der jetzt lebenden Aerzte, Wundärzte, Geburtshelfer Apotheker und Naturforscher aller gebildeten Völker Copenhagen and Altona [The Author] 1830–45. 33v

An author catalog of 99,001 numbered items. The first 21 volumes cover A–Z, 22, anonymous and miscellaneous works; and 23–25, periodicals. V 26–33 cover A Z again. Covers mostly nineteenth-century references, with some from late eighteenth century Valuable index but expensive and difficult to obtain.

Garrison (no. 311) characterized this work as "the first attempt to give an indexed author catalogue of an entire period including the contents of periodicals." He comments again (no. 182) on this work as follows: "Of well nigh infallible accuracy as to names, dates, numerical data and cross-references, Callisen gives a complete bibliographer' description of each separate item, wherever possible, abounds, too, in collateral biographic and historic data. Volumes 23–25 contain definitive catalogue, not only of the medical periodicals of 1780–1833 but also of secular and scientific journals of the period containing matter of medical interest. He even indexes the contents of the more importa t medical periodicals by volumes.

An amazingly full list of titles for this period, including many general journals contain g occasional medical or scientific articles, cyclopedias, collections, transactions and almanacs. Much bibliographic information is furnished and the contents of i dividual olumes are frequently given.

89

Canstatt's Jahresbericht über die Fortschritte der gesammten Medici i allen Ländern. Würzburg, 1 25 1841–65

Edited by C. F Canstatt and Gottfried Eisenmann. 1841–45 entitled *Jahresbericht über die Fortschritte* Old fashioned review and abstract journal. Good subject reviews. Continued as *Jahresbericht über die Leistungen* (no. 96)

90 *

Excerpta medica, the International Medical Abstracting Service covering every as-

pect of the important medical literature of the world. Amsterdam, v 1 1947+

Subtitle varies. Published in English in 16 sections. Article titles in full with English translation. Most comprehensive abstracting service in English. An indispensable tool for all medical libraries.

The Excerpta Medica Service Corporation, 280 Madison Avenue, New York 16, N Y offers an abstracting service which provides clients with abstracts on cards of references on specific subjects published during 1951 and later. Another special service provides photostatic or typewritten copies of the complete papers from which *Excerpta Medica* abstracts have been made, translated into English if desired.

Section I, Anatomy Anthropology Embryology and Histology, 1 1947+ Section II, Physiology Biochemistry and Pharmacology 1 1948+; Section III, Endocrinology 1 1947+ Section IV Medical Microbiology and Hygiene, 1, 1948+ Section V General Pathology and Pathological Anatomy v 1, 1948+ Section VI, Internal Medicine, 1 1947+ Section VII, Pediatrics, 1 1947+; Section VIII Neurology and Psychiatry v 1 1948+ Section IX, Surgery 1 1947+ Section X, Obstetrics and Gynaecology 1 1948+; Section XI, Oto-Rhino-Laryngology 1 1948+ Section XII, Ophthalmology 1, 1947+ Section XIII Dermatology and Venereology 1 1947+ Section XIV Radiology 1 1947+ Section XV Tuberculosis and Pulmonary Diseases, 1 1948+ Section XVI, Cancer (Experimental and Clinical) 1, 1953+

Beginning January 1955 Section IV "Medical Microbiology and Hygiene, appears as two separate sections Section IV "Medical Microbiology Immunology and Serology and Section XVII "Public Health, Social Medicine and Hygiene (including Industrial and Occupational Medicine and Rehabilitation)

91

Far Eastern Science Bulletin Abstracts of Scientific Papers Published Only in the Japanese and Chinese Languages Washington, v 1–4 no. 1, 1941–44

Published by the Oriental Science Literature Service of the American Documentation Institute. Special bibliographic number 1941 contains bibliography of Japanese medical journals. Subject matter is almost exclusively medical. Covered about 50 periodicals.

92 *

Index Medicus, a Quarterly Classified Record of the Current Medical Literature of the World. New York; Boston and Detroit; Boston and Washington [Washington] Series I, v.1 21 1879—April, 1899 Series II, 1–18, 1903–20, and war suppl, 1914–17 Series III v 1–6, 1921–26.

Series I–II issued monthly Series III, quarterly and title varies accordingly It merged with the *Quarterly Cumulative Index* (no. 99) in 1927 For its period, the *Index Medicus* is the most complete index to medical literature, including both books and articles and containing many references unobtainable elsewhere, even in the *Index Catalogue*

Series I–II constitute a classified index of medical literature, an outline of the scheme of classification being given in Series I, v 6, p.2–6, 1884 Publication was suspended May–December 1895 and the literature for that period was later included in 18 appended to the April, 1896, issue. From May 1899 to December 1902, publication was again suspended, and the only annual index for that is easier to use the *Index-Catalogue* (no. 85) Unfortunately this last is not nearly so comprehensive or accurate. Series II includes the *Index Medicus War Supplement* a classified record of the literature of military medicine and surgery 1914–17

Series I and II of the *Index Medicus* while comprehensive and accurate, are difficult to consult rapidly Therefore, in order to obtain subject references for the older literature, unless very complete coverage is required, it is easier to use the *Index-Catalogue* (no. 104) and for the more modern literature, the *Quarterly Cumulative Index Medicus* (no. 99)

In Series III, 1921 26, it is necessary to check any subject four times in each volume, since there is no cumulated subject index. The last volume consisted of five issues, instead of four

93

Index medicus novus Inhaltsangabe der periodisch erscheinenden medizinischen Literatur aller Länder Wien, 1 2, June 15 1899—Feb. 10–25 1900 2v

Edited by Conrad Dohany No. 1–6, 1899 as *Die Medicinische Weltliteratur* Of value only because the *Index Medicus* was not published for this period. Classed subject arrangement and no author index make it difficult to use.

94

Indice di periodici scientifici e tecnici, [Sezione] V medicina—biologia—psicologia. [Rome] 1 1949+

Compiled by the Centro Nazionale di Documentazione Scientifico-Tecnica of the Consiglio Nazionale delle Ricerche. Monthly publication giving tables of contents of journals arranged by class. List of journals covered. Especially good for Italian literature. Section numbering varies.

95

International Medical Digest. Hagerstown, Md., .1 1920+

Issued monthly in loose leaf form. Covers literature of particular interest to the practicing physician, and includes little foreign literature. Not comprehensive.

96

Jahresbericht über die Leistungen und Fortschritte in der gesamten Medizin. Berlin, 1–51, 1866–1916.

Continues *Canstatt' Jahresberichts* (no. 89) Founded by Rudolf Virchow. Arrangement similar to *Schmidt' Jahrbücher* (no. 101) Good for older foreign literature.

97

Kongresszentralblatt für die gesamte innere Medizin und ihre Grenzgebiete. Berlin, 1 1912+

V 1–11 as *Zentralblatt.* Comprehensive abstract journal published by the Deutsche Gesellschaft für Innere Medizin. Especially good for foreign literature. Had an annual supplement, *Jahresberichts innere Medizin*, 1912–31, a classified subject bibliography of the titles covered by the *Kongresszentralblatt.*

98

Medizinischer Literaturnachweis: deutsche und ausländische Bücher Zeitschriften und Zeitschriftenaufsätze aus den Beständen der Öffentlichen Wissenschaftlichen Bibliothek zu Berlin. Berlin, Jahrg. 1 1952+

A monthly index to the literature on medicine in the Öffentliche Wissenschaftliche Bibliothek in Berlin. Includes books and also articles from the 443 periodicals received by the library of which 231 are German and 212 foreign. Lists these journals with key to their abbreviations. No indexes.

99

Quarterly Cumulative Index Medicus. Chicago, [old ser] 1–12, 1916–26; [new ser] .1, 1927+

Published by the American Medical Association. V 1 12, 1916–26, as *Quarterly Cumulative Index to Current Medical Literature*. This index is the most easily used current international index to medicine and the allied sciences. No medical library can afford to be without it. It is, of course, particularly useful to English-speaking readers, but there is no medical index of equal excellence published in any other country. It is conveniently arranged, is easy to consult rapidly and has good cross references and subject headings. The abbreviations used for periodicals are not always consistent and do not conform to the internationally recommended form endorsed by the *International Organization for Standardization (ISO) Bulletin 23* now beginning to gain acceptance. The form used for entries also deviates from the more generally accepted form.

The first series was designed as an index for the practitioner; therefore it indexed clinical subjects thoroughly but anatomy and other pre-clinical subjects less so than does the *Index Medicus.* Therefore, if complete coverage of these subjects, from 1916 to 1926, is desired, both indexes must be consulted. In 1927 it merged with the *Index Medicus* to form the new series. F H. Garrison, in "The Quarterly Cumulative Index Medicus," *J Amer Med Ass.*, (July 2, 1927) 26–29 and Estelle Brodman, in "The contribution of the Army Medical Library" *Spec. Libr* 43 (February 1952) 48–54 and 73–76, discuss the history of these indexes. From 1927 to 1931 the new series was supported by the American Medical Association and the Carnegie Institution of Washington, but the Association handled all of the details of publication. Since December 1931 the American Medical Association has carried the full burden of financial support, editing, and publication.

Up to 1945 the *Quarterly Cumulative Index Medicus* was published four times a year. The bound volumes for December and June of each year cumulated the entries for the preceding six months. At present only the bound volumes are being issued and there has been a delay of one to two years in publication ever since World War II.

Authors and subjects are arranged in one alphabet. In the author entry for English, French, German, Spanish, Italian, and Portuguese articles, the title is given in the *original* language; for other languages, literal translation or transliteration is used. Article titles in subject entries are *always translated* and all titles under subjects are shortened, expanded, or inverted for the sake of subject emphasis, and are not complete, or in the case of translations, literal. Beginning with volume 51 1952, symbol, forming part of the subject entry indicates language in which article is written.

The periodical index is preceded by list

of new books entered under the author with full bibliographic information, and also under subject. A list of journals indexed, arranged by the abbreviation used in the *Index* gives full title publisher and address. There is also a directory of medical publishers, American and foreign. A list of periodicals indexed for the first time appears in each volume: new periodicals are indicated by symbols.

Through 40, 1946, biographies and obituaries of individuals are listed both under their names and under "Biography" after that date, obituaries are listed under "Obituaries" and biographies under individuals names.

Beginning in 1950 with 47 offset reproduction was adopted. The preface was expanded and now includes very clear directions for the use of the index, with examples.

100

Quarterly Review [a] [of medicine, surgery and their specialties] Washington, 1942+

Published by the Washington Institute of Medicine. Titles vary: subject sections appearing first in one, then in another of the publications. Short reviews precede abstracts. Little foreign literature included. Chiefly of interest to the practitioner. Various sections were absorbed in 1952 by the *International Record of Medicine and General Practice Clinics.*

101

Schmidt's Jahrbücher der in- und ausländischen gesammten Medicin Leipzig, 1–336, 1834–1922.

V 41–80 as *Carl Christian Schmidt' Jahrbücher* An old-fashioned combination of review and an abstract journal, arranged by classification. Very comprehensive. The subject indexes for the early volumes are not adequate, and the citations in these volumes are not always complete. After 1882 it evolved into an abstract journal.

102 *

U.S. Armed Forces Medical Library Armed Forces Medical Library Catalog. Washington. Library of Congress, April, 1948+ Processed.

Issued as *Supplement to the Library of Congress Catalog* by photo-offset reproduction of Armed Forces Medical Library catalog cards. In two parts Part One, Authors; Part Two, Subjects. In addition to currently received material, the *Catalog* lists, under author material re-cataloged from the old collection when no entries were found in the Library of Congress catalogs. Pre 1801 titles and Americana titles through 1820, cataloged at the Armed Forces Medical Library' History of Medicine Division, Cleveland, Ohio, are included beginning with the 1950–54 cumulation which supersedes the annual volumes for 1950–53.

The above limitations apply also to Part Two, Subjects. In addition, Part Two, Subjects, is limited to titles published since 1925, with the following exceptions: (1) important reference and historical materials; (2) biographies and bibliographies (3) periodicals (4) congresses; (5) statistical documents and (6) works about various institutions (i.e., hospitals, clinics)

The continuity of the Armed Forces Medical Library' bibliographic record, begun in 1880 with the *Index-Catalogue of the Library of the Surgeon-General' Office* is maintained by the *Current List of Medical Literature* and the *Armed Forces Medical Library Catalog* although these are not as complete, especially for periodical literature. The *Catalog* makes available to librarians the entries, classification, and subject headings adopted in the Armed Forces Medical Library

First issued in 1948 as *Army Medical Library Catalog Cards* in 1949–50 as *Army Medical Library Author Catalog* in 1951 as *Army Medical Library Catalog* (this was the first volume to contain Part Two Subjects) 1950 has subject index no subject approach before 1950.

It is important to remember that entries for medical material received and cataloged by Armed Forces Medical Library from October 1946, to March, 1948, and not in the Library of Congress, are included in the Library of Congress' *Catalog of books* and its first supplement cards for these entries were supplied by the Armed Forces Medical Library

103 * *

—— Current List of Medical Literature. Washington, 1 1941+ Processed

Published by the Armed Forces Medical Library A monthly index to the periodical literature in medicine and its allied fields, covering about 1 400 periodicals. Each issue consists of three parts I, Register of articles, an alphabetic arrangement by journal titles, each title heading list of the articles within one or more issues. Paging, original title, and translations of foreign language titles are given each article is numbered serially II Subject index. III, Author index. Each issue

also contains a section, "Medical project reports. Two volumes are published yearly with cumulated author and subject indexes and list of the periodicals indexed.

Lists of journal titles indexed and medical projects report sources are issued separately from time to time. An official list of subject headings used has been published.

Essential for any medical library. It is issued promptly and covers many periodicals not i the *Q.C.I.M.* Indexes over 100,000 articles each year. Slower and more difficult to use than the *Q.C.I.M.* and the form of citation ca easily lead to error in quoting references. The preclinical sciences are more thoroughly covered than in the *Q.C.I.M.* Slavic literature is well covered. A detailed statement on indexing policies ppears from time to time

Issued weekly through v 18 1950. I 1 18, the journal contents were arranged by broad subject classification. The weekly issues, in pocket format, were intended to provide prompt access to current literature in connection with the Army Medical Library's Medicofilm Service.

Published by the Friends of the Army Medical Library through 9 no. 9, A gust 31 1945 and with the Medical Library Association from 3, 1942, through 9 no. 9 1945 *Recent Book Acquisitions* was issued as supplements to 1–6. No author indexes were included before 18, 1950 Subject index in each olume, 1–8 (1941 45); monthly or bimonthly subject indexes in 9–18 (1945–50) Cumulative author and subject indexes i one alphabet in 19 and 20, 1950–51 Since 1952 author and subject indexes appear in separate alphabets

A special issue (v 12, no. 7-B, February 28, 1947) entitled *Publication Board scientific and industrial reports (medical)* lists research reports "previously withheld from general distribution for military reasons.

104

——Index-Catalogue of the Library of the Surgeon General' Office, United States Army Washington, Series I, A–Z, 1 16, 1880–95 Series II, A Z, 1 21, 1896–1916· Series III, A Z, 1–10, 1918–32 Series IV A M, 1–11, 1936+ (Dates are those of publication. V.11 in preparation)

Each series of the *Index-Catalogue* comprises single alphabet. Books, theses, and pamphlets are entered nder both author and subject, while journal articles appear under subject only Perhaps its greatest alue lies in the fact that it is a selective, cumulated bibliography obviating the necessity of searching laboriously the annual indexes. T illustrate: with the volumes covering the subject "Blood, taken from all four series, one can obtain working bibliography which includes practically everything from the oldest historical works on the subject down to the literature indexed in the latest olume, this case, 1937 Its value in obtaining rapid orientation in any given subject is incalculable.

General information. Letters of transmittal t the front of each volume throughout the various series indicate changes in policy or arrangement and summarize statistics re garding the *Index-Catalogue* and the library itself. A list of corrigenda is published at the back of the *last* volume of the first three series; beginning with Series IV v 2, it ppears in *each* volume.

Irregularities and omissions. Volumes 1–10 of Series III are dated 1918–32, but from 6, 1926, to 10, 1932 (G–Z) this series contains (with the one exception of *book* titles) only material published through 1925. (See letter of transmittal to Series IV v 1 p. IV) The periodical literature omitted from these volumes is included in the Series IV volumes for G–Mn. Series IV 1 1936, omits literature alphabeting from A to Acidosis, post-operative for the years 1933–36. (See letter of transmittal to Series IV 1 p. VI.)

Author entries Under the thor s name, usually with dates of birth nd death, ca be found (1) books and pamphlets published as separates, but *not* articles in periodicals; (2) notation of any works where the author appears as editor translator compiler etc. (3) biographies, portraits, obituaries, etc., of the author

Subject entries Under subjects, entries are arranged i tw alphabets by author the first comprising separates (books, etc.) the second, articles serials.

Periodicals and national and international congresses. The *Index-Catalogue* contains va aluable information concerning periodicals. These lists are arranged both by title and geographically by country They may be located as follows:

Periodicals listed by abbreviation then by title Series I, 16, 1895 Supplement, p.1 282, cumulates lists first published in Series I, 1 1880, p.1–126, and 7, 1886, p 1–100. Series II, 21 1916, p.1 233, cumulates list of additions since publication of Supplement to Series I, 16, and should be used with that list. Series III: each volume of this series contains list of additions, but there are no cumulated lists. Series IV 2, 1937

p.21–98 a list of 3,223 periodicals which ha been received and indexed since 1919 including most of the titles in Series III. Full bibliographic information is not given, but place of publication is indicated. The lists n Series I, II, and IV cover the majority of the titles indexed through 1936. List of abbreviations for serial publications used in Series IV 1948, p.1–138 (also repri ted) can be obtained separately

Periodicals listed by country Series I v 10 1889 p.723–935 contains list of periodicals rranged by country and under each country by title. Series II v 12, 1907 p.839–978, ontains similar list which supplements that in Series I 10. No later geographic list has been issued.

References to literature about periodicals. Series I, 7 1886, p.301–02 under "Journals and "Journalism Series II 8, 1903 p.532–33, under *"Journalism ; Series II* 12, 1907 p.838–39 under "Periodicals Series III, v 7 1928, p.100, under "Journalism.

Additional information concerning periodicals may be found under various special subject headings, such as "Obstetrics—Journals, and under the titles of the journals in their proper alphabetic sequence throughout the *Index-Catalogue*

International and national co gresses Series IV 3, Suppl. 2, 1938, 294p consists of "Congresses tentati chronological and bibliographical reference list. F om the standpoint of medical libraries, this is one of the best and most comprehensive lists of congresses. It is not limited to the holdings of the Army Medical Library but items in that collection are indicated. Arranged by subject and by country within each subject, it includes place of meeting, dates, and where proceedings are published for 1,739 entries. The first additional list of congresses is prefixed to Series IV 4 1939 p.29–51

Historical data. Because of the early works listed, the *Index-Catalogue* affords splendid introduction to th historical background of any medical subject. A list of incunabula and rare imprints dated between 1500 and 1525 originally prepared in two parts by F H. Garrison (no. 200) is found in Series III, 10, p.1,415–36 and "Biobibliography of sixteenth century medical uthors, prepared by Claudius F Mayer (no. 177) ppears as supplement to Series IV 6. For discussion see Chapter 12.

Due to the increasing time lag between the publication date of each volume and the dates of the material indexed therein, and the ever-increasing unpublished backlog of indexed material, the decision was taken in 1950 to discontinue publication of the *Index Catalogue* following the appearance of volume 11 of Series IV covering the Mh-Mn segment of the alphabet and including large section on Military Medicine. No materials received at the Armed Forces Medical Library after April 1 1950, are listed in the *I dex-Catalogue.* (See F R. Rogers and S. Adams, "The Army Medical Library's publication program, *Texas Reports on Biology and Medicine* 8 (1950) 271–300.)

A microprint edition of the *Index Catalogue* is available from the Readex Microprint Corporation, 18 E. 41st St., New York 17

The *Current List f Medical Literature* and the *Armed Force Medical Library Catalog* together now cover much of the same ground as the *Index-Catalogue* did, and make the literature *vailable relatively soon* after publication.

Special attention is called to the unpublished material which was intended for later volumes of the *Index-Catal gue* the card files in the Armed Forces Medical Library known as the Subject Index and the Author Biography File. The entries in these files (over tw million cards) supplement those in the printed volumes up to April 1 1950, when indexing was discontinued. Since these files hav an approximate twenty year range, vast amount of literature is accessible in them. Photoprints and microfilm of all cards under specific headings can be obtained. It is planned to publish from these cards five-volume supplement to the *Index-Catalogue* which will contain the monographic literature arranged by author by subject, and by individuals written about. Periodical literature will be included only when it is biographic.

103

U S. Veterans Administration. Medical and General Reference Library Popular medical books *written by physicians, 1940–1952;* annotated bibliography Washington. The Library 1952. 33p. Processed

Subject arrangement of 255 titles, with quotations from reviews.

104

World Health Organization. Library news. Geneva, [1] 1947+ Processed.

In ddition to news notes, lists all acquisitions and has, as supplements, bibliographies on special subjects and "Periodicals currently received. Includes United Nations and government documents on health difficult to locate.

107
Zentralblatt für innere Medizin. Leipzig, v 1–64, 1880–1943.
V 1–14, 1880–93, as *Zentralblatt für klinische Medizin*. Good for older material, especially German, but not so comprehensive as the *Kongresszentralblatt* (no. 97)

108
Zentralblatt für die medizinischen Wissenschaften. Berlin, 1–53, 1863–1915.
One of the best of the older abstract journals. Especially good for older foreign literature.

SEE ALSO abstract, review or bibliographic sections of *Ärztliche Wochenschrift*; *British Medical Bulletin*; *Canadian Medical Association Journal*; *Deutsche Medizinal Zeitung*; *Deutsche medizinische Wochenschrift*; *Journal of the American Medical Association*; *Prensa médica argentina*; *Presse médicale*; *Revista médica latino-americana*.

Indexes and abstract journals, National

Under the stimulation of UNESCO and of various international conferences on documentation, national bibliographies in various subject fields have begun to appear. Scott Adams' article, "National medical indexes" (*Bull. med. Libr. Ass.*, 38 (July 1950) 230–45) discusses some of them. Examples are given below and, in addition, medical and scientific literature is included in the general national bibliographies mentioned under Science—Bibliographies.

Belgium

109
Archiva medica Belgica. Bruxelles, 1 1946+
Published by the Association des Sociétés Scientifiques Médicales Belges. Contains "Bibliographia Medica Belgica": abstracts of periodical articles, lists of journals and books. Occasional review articles based on work of Belgian authors.

Brazil

110
Maia, Jorge de A. Indice-catálogo médico brasileiro. S. Paulo, 1, 1937–3+
Published by the Conselho Bibliotecário do E. de São Paulo and by the Faculdade de Medicina da Universidade de São Paulo. National bibliography of medicine arranged by author and subject in one alphabet. Includes list of journals indexed, with abbreviations; a list of Brazilian medical schools, medical societies, pharmaceutical laboratories, and drug firms. V 3, 1940, is last volume issued but continuation is in preparation.

Cuba

111
Trelles y Govín, Carlos M. Contribución de los médicos cubanos a los progresos de la medicina. Habana, Dorrbecker 1926. 276p.
Contributions of Cuban doctors, arranged under special subjects.

Czechoslovakia

112
Bibliographia medica Čechoslovaca. Prague, 1 1947+
Published by Centrum Documentationis Medicae and, beginning 2, by Societas Medicorum Cechoslovacorum. Arranged by Universal Decimal Classification. V 1–2, 1947–48, continued on four-by-six cards issued irregularly and probably not complete. Unknown if subsequent printed volumes have been issued or planned.

Denmark

113
Index medicus Danicus. København, 1 1950+
Prior to 1950 issued on cards. Classed arrangement. Brief annotations. Published 1950–54 by the University Library Scientific and Medical Department, 49 Nörre Allé. Thereafter it appears as two of the monthly issues of the *Danish Medical Bulletin* published by the Danish Medical Association. The *Bulletin* began publication April 8, 1954, as a monthly supplement to the *Ugeskrift for laeger*.

Egypt

SEE National Research Council of Egypt (no. 61)

Finland

114
Medicina Fennica. Helsinki, [1] 1925+ Supplementum 1 1951+
Published annually by Suomalainen Lääkäriseura Duodecim. Contains abstracts, mostly in English, of literature published in Finland or by Finnish authors published abroad. Classified subject arrangement with author index. Supplementum 1, "Obstetrical and gynecological literature, 1901 to 1950," 118p.

France

115
Syndicat National des Éditeurs. Section de Médecine. Bibliographie des livres français de médecine publiés de 1940 à 1950. Paris. The Syndicat, 1950. 95p.
Classified list with author index covering war and postwar period. List of periodicals included.

Germany

SEE *FIAT review of German science* (no. 5)

Great Britain

116
British Medical Book List. London, v 1 1950+
Sponsored by the Medical Department of the British Council. No annotations. Monthly

Israel

117
Muntner Sussmann. Contribution to the history of the Hebrew language in medical instruction. Jerusalem Geniza, 1940. 128p. (Sources of reference of the history of Hebrew medicine, I–II)
In Hebrew with English "Summary and discussion Reviews medical literature in Hebrew from the earliest manuscripts to the present. Includes lists of medical dictionaries, periodicals, and encyclopedias.

Italy

118
Bibliografia medico-biologica rassegna generale mensile dei libri della stampa periodica italiana di medicina biologia. Roma, anno 1 1939–45(?)
A classified abstract journal for the current medical, biologic, veterinary and pharmaceutical literature of Italy. Six double numbers yearly Brief résumés of current congresses.

SEE ALSO "Medicina, Section B of *Bibliografia italiana* (No. 1)

Japan

119
Japan Science Review Medical Sciences. Tokyo, 1 1952 53+
V 1 of this classified bibliography covers about 4,000 articles which appeared in Japanese medical journals from April, 1952, through March, 1953. English abstracts for some 800 of the articles are included. Language of original is indicated, and whether or not abstracts are given in any European language. Dentistry and preclinical sciences included. Published annually and edited jointly by the Scientific Information Service of the Ministry of Education and the Science Council of Japan. Address: Gihodo, 5 Akasaka-Tameike, Minato-ku, Tokyo. There is also another section of the *Review* subtitle "Biological Sciences, v 1 1949–50+

120
Japanese Journal of Medical Sciences. Tokyo, v 1–4 1922–27; [n.s.] 1 1925+
Published by the National Research Council of Japan. English or German abstracts of the Japanese medical literature. Contains, besides abstracts, the transactions of various Japanese societies. The abstracts within each section are arranged chronologically Its 13 sections are A. Anatomy v 1–11 no. 4, 1927–44 B. Biochemistry 1 5 no 2, 1925–44 C. Biophysics, 1 10, no. 2, 1927–43; D. Pharmacology v 1–16, no. 2, 1926–44 E. Pathology 1–7 no 4, 1926–44 F Bacteriology and Parasitology 1 2 no. 4, 1929–42 G Social Medicine and Hygiene, 1–4 no. 1 1930–43 H. Internal Medicine, Pediatry and Psychiatry 1–6, no. 2, 1927–43; I Surgery Orthopedy and Odontology 1–6, no. 2, 1927–43 J Ophthalmology 1–4, no 2, 1929–44 K. Gynecology and Tocology 1–2, no. 3, 1936–41 L. Oto-rhino-laryngology 1–4 no. 2, 1927–44 M Dermatology and Urology 1–2, no. 3 1927–42.

Poland

121
Polska bibliografia lekarska. Warszawa, 1925–26+
Published by Państwowy Zakład Wydawnictw Lekarskich. Monographs and journal articles in one list by author and subject separate lists of medical and nonmedical journals which have been indexed annual but not up to date (volume for 1946 published in 1951)

Portugal

122
Bibliografia médica portuguesa. Lisboa, 1, 1940–44+ (Published 1947+)
Compiled for the Instituto para Alta Cultura, Centro de Documentação Científica, by Zeferino F Paulo Each issue now covers year Classed arrangement with author index.

Serbia

123

Bibliografija srpske zdravstvene književnosti, 1757–1918. [Bibliography of Serbian medical literature, 1757–1918.] Beograd [Shtampa Jugoslovenskog Shtamparskog Preduzeda] 1947 223p. (Biblioteka Srpskog lekarskog drushtva, 1)

Compiled by Jeremod Risto. Printed in Cyrillic characters. Classified. Lists works by Serbian and Montenegrin authors published in Serbia or abroad and translations made by them; also reports of medical society meetings and the contents of a few medical journals. *Bibliografija Srpskog Arkhiva* 1918–41 published as no. 2 of same series, gives contents of the *Arkhiva*.

Sweden

see Svenska Institutet (no. 9)

Switzerland

124

Bibliographia medica Helvetica. Basel, 1 1943+

Broad subject arrangement. Irregular. Comprehensive bibliography of publications with Swiss imprints, by Swiss authors, or about Swiss medicine with foreign imprints. List of Swiss medical journals. Published by the Schweizerische Akademie der Medizinischen Wissenschaften in collaboration with the Schweizerische Landesbibliothek.

U. S. S. R.

125

Association France—U.R.S.S. Bulletin de bibliographie du Centre Culturel et Economique, Section des Sciences Médicales. [Paris, 1951(?)+] Mimeographed

Lists recent Russian monographs by subject; titles in French translation only: semi-annual.

126

Meditsinskaia literatura SSSR; sistematicheskii ukazatel' knig i zhurnal'nykh statei [Medical literature of USSR, systematic index of books and magazine articles.] Moskva, [1–6] 1931 36( )

Continues *Nauchnaia* (no 127). A classified subject index published by the Vsesoiuznyi Institut Eksperimental'noi Meditsiny im. A.M. Gor'kogo, Meditsinskoe Bibliograficheskoe Biuro, from material prepared at the Institute library and the State Scientific Medical Library of the People Commissariat for Public Health. Issued several years late, v 2 for 1932 being published in 1937 Includes biographies, necrologies, and jubilee material under the heading, "Biographies. Text in Russian.

127

Nauchnaia literatura SSSR, sistematicheskii ukazatel' knig i zhurnal'nykh statei. Meditsina. [Scientific literature of the USSR; systematic index of books and magazine articles. Medicine.] Moskva, [1–3(?)] 1928–30(?)

A comprehensively classified index to the medical literature. Biographical material can be found under "Personalia. Continued as *Meditsinskaia* (no. 126)

128

Novaia meditsinskaia literatura. [Moskva] 1946(?)+ Mimeographed.

Issued by Ministerstv Zdravookhraneniia Soiuza SSR, Gosudarstvennaia tsentral'naia Meditsinskaia Biblioteka. Lists new Russian medical literature, books by author journal articles by subject. No annotations. None of the issues available had indexes.

129

Richnell, Donovan T English index to Soviet medical periodicals available in London libraries, together with location list of the periodicals indexed ed. on behalf of the Medical Committee of the Society for Cultural Relations with the U.S.S.R. London, 1 1945–47+

A list of contents of journals, with transliterated titles given in full, followed by abbreviation and the meaning in English. Bibliographic index contains 10,000 author and subject entries. Journals indexed in the *Quarterly Cumulative Index Medicus* are omitted here and only those readily available in London are included. This is therefore not comprehensive.

130

Sovetskoe meditsinskoe referativnoe obozrenie. [Soviet medical abstracting review] Moskva, 1948(?)+

Published by Gosudarstvennoe izdatel'stvo meditsinskoi literatury in 14 sections. Abstracts arranged by subject. A cumulative author and subject index has appeared covering the years 1945–49 ther were no indexes in any of the separate sections examined. The sections are: A. Akusherstvo i zhenskie bolezni [Obstetrics and gynecology]; B. Bolezni ukha, nosa gorla [Otorhinolaryngology]; C. Detskie bolezni [Pediatrics]; D Glaznye bolezni [Ophthalmology]; E. Khirurgicheskie bolezni [Surgical diseases]; F Kozhny i venericheskie bolezni [Skin

Arranged by subject. Besides journals, it includes collected papers, bulletins, and society transactions. Good bibliographic details and annotations.

148

Medical Library Association. Committee on Periodicals and Serial Publications. A selective list of Latin-American [medical] serials. Washington Army Medical Library 1951 33 leaves.

An alphabetic list of 700 titles compiled with the cooperation of the Armed Forces Medical Library and others from list of 1500 titles, based on the *Catalogo colectivo de publicaciones periódicas* (no. 145) E also ated in three groups (1) "Essential in any comprehensive collection (66 journals) (2) "Essential only in a research collection (169 titles); (3) "Useful only in large research collections" (465 titles) Evaluation based on usefulness to North American libraries.

149

Pan American Sanitary Bureau. List of medical and public health journals of Latin America. Washington [The Bureau] 1946. 43p. (Publication no. 223)

Alphabetic list with classified subject list subdivided by country Address, frequency of publication, and price usually given. Useful. Earlier editions are 1940 and 1943.

150

Paris. Université. Faculté de Médecine. Bibliothèque Catalogue des principaux périodiques et congrès de la Bibliothèque de la Faculté de Médecine de Paris. Publié par les soins du Docteur André Hahn. Paris Person, 1952. 437p.

In three parts (1) an alphabetic listing, with place of publication, holdings, classification numbers, and changes of title, of about 4,000 selected serial titles (the Library' holdings total about 12,000) including journals, annual reports of institutions, organizations, and government gencies, yearbooks, annual announcements or catalogs of medical schools and other organizations (2) list of publications of 297 congresses, International and national, arranged by subject with dates and places of meeting (3) subject ndex to part 1 with geographic subdivisions under each subject. Intended for use by readers and for photoduplication requests.

151

Paulo, Zeferino F Periódicos portugueses de medicina ciências subsidiárias lista alfabética. Pôrto Jornal do Médico, 1944. 90p

Prepared for Instituto para Alta Cultura Serviço de Inventariação de Bibliografia Científica. Alphabetic list giving history dates of publication, and abbreviations. List of scientific institutions of interest to medicine. Subject, chronologic, and geographic indexes.

152

Periodica medica Titelabkürzungen medizinischer Zeitschriften. 4. Aufl. von Walter Artelt, Edith Heischkel, Carl Wehmer Stuttgart. Thieme, 1952. 280p.

List, with abbreviations, of 12,624 publications; no other information. An unselectn list, including proceedings of state and municipal societies and department of health publications. Many titles of only local interest. The abbreviations follow those recommended in the *International Organization for Standardization (ISO) Bulletin* 23 lengthened where necessary for identification.

153

Società Lombarda di Scienze Medico-biologiche ed Istituto Sieroterapico Milanese "S Belfanti. Catalogo dei periodici medici raccolti nelle Biblioteche Lombarde a cura di E. Cuboni ed A. S. Roversi. Milano: Istituto, 1949 190p.

Revision of 1936 edition. Union list holdings of approximately 80 Lombardy libraries. Especially good for Italian titles. Abbreviations and place of publication given but not date of first volume or genealogy of periodical.

154

Special Libraries Association. Southern California Chapter Union list of periodicals and other serial publications in the medical and biological sciences libraries of the greater Los Angeles area. Los Angeles The Chapter 1951 262p Mimeographed.

Holdings for 17 libraries. Genealogy of journals included.

155

U.S. Army Medical Library Japanese medical journals currently received. Washington The Library, 1950. 12 leaves. Mimeographed.

About 150 titles, transliterated and translated, with publishers' addresses.

156

------ Post-war Soviet serials of medical interest Comp. by Scott Adams. [Washington. The Library 1950.] 24 leaves.

Transliterated titles for 380 entries. Useful for titles only

157

U S Veterans Administration. Library Serv

ice. Special Services. Union list of serials in the medical libraries of the Veterans Administration. Washington: Veterans Administration, 1953. 384p.

138 * *

Vital Notes on Medical Periodicals. Philadelphia, 1 1952+ Processed.

Issued quarterly by the Medical Library Association's Periodicals and Serial Publications Committee. Lists new journals which begin 1950 and later. Notes changes in title, supplements, mergers, and titles suspended or discontinued. Very practical.

139

World Health Organization. Library. "Current indexing and abstracting periodicals in the medical and biological sciences," *World Health Organization Library News* 6 (1953) Suppl. 1 Processed.

A selected, annotated, alphabetic list of 179 titles available in the library. Contains much useful information.

140

———"Periodicals currently received, 1951" *World Health Organization Library News* 4 (1951) Supplement 1

Revised annually. Full title, place of publication, and holdings for the WHO Library and medical holdings for the United Nations Library Geneva.

141 * *

World medical periodicals. Paris: UNESCO 1952. 237p.

Compiled by Leslie T Morton. A useful checklist published jointly by the World Health Organization and UNESCO at the suggestion of the UNESCO Coordinating Committee on Abstracting and Indexing in the Medical and Biological Sciences based on the list made available to the Committee by Dr Hugh Clegg of the British Medical Association. Lists alphabetically approximately 4,000 titles, with abbreviations used in *World list* (no. 25) modified by the International Organization for Standardization recommendations. Gives place of publication, language symbol, frequency of issue, and symbols indicating coverage by certain abstracting services. Slavonic, Greek, and oriental titles arranged by English translation. Subject and geographic indexes. Limited to periodicals current in 1950 and journals which ceased publication during the period 1900–50. Pharmacy dentistry chemistry and veterinary medicine are included. The use of the list would have been increased if coverage had been included for the *Quarterly Cumulative Index Medicus* (no 99) the *Current List* (no. 103) and the most important German abstracting services. Future revisions are planned.

142

Yoshioka, Joseph G ed. "Japanese medical journals available at the Medical Library Tokyo Imperial University" *Far Eastern Science Bulletin* 1 (1941) special bibliographic number 46p.

Available for $1 from American Documentation Institute. 382 entries titles in Japanese characters and in English. Journals available in Washington, D.C., are starred.

SEE ALSO "List of journals indexed" in each volume of *Quarterly Cumulative Index Medicus* (no. 99); list of journals indexed in the *Current List of Medical Literature* (no. 103); annotation "Periodicals, *Index Catalogue of the Library of the Surgeon-General's Office* (no. 104); and Science—Lists of periodicals (no. 13–25)

Lists of international congresses

Information concerning international congresses is important to medical libraries and has hitherto been hard to secure. Recent useful publications include the National Research Council' *News Report* the Pan America Union, Division of Conferences and Organizations *Inter-American conferences 1826–1948* (Washington The Union, 1949) 16 leaves, and its *Forthcoming Inter American conferences and meetings* the U.S. National Science Foundation, Office of Scientific Information's *List of international and foreign scientific and technical meetings* (Washington The Foundation, 1952+); the U.S. Department of State, Division of International Conferences *List of international conferences and meetings* and its *Participation of the United State Government international conferences* (Washington Govt. Print. Off., 1946+)

143 *

Council for International Organizations of Medical Sciences. Bulletin 1 1950+

Lists and calendars of forthcoming international congresses and résumés of past congresses. V 1 2, 1950–51 as *Council for the Co-ordination of International Congresses of Medical Sciences Quarterly Bulletin.*

144

International congresses and conferences 1840–1937 a union list of their publications available in libraries of the United States and Canada. Ed. by Winifred Gregory under the auspices of the Bibliographical Society

of America. New York: Wilson, 1938. 229p.

Lists the holdings of 110 libraries. Many medical congresses included. National congresses, diplomatic congresses, and those held under the auspices of the League of Nations are omitted. Subject index. T some extent this list and that in the *Index-Catalogue* (no. 104) supplement each other

165

National Research Council. International scientific congresses held since 1930, or announced for 1941 or later Washington The Council, April, 1941 46p. Mimeographed.

Compiled in the library of the Council from news items, printed lists, programs, and similar sources. The 454 entries furnish usually only name, number location, and date of congress.

166

Stumke, Hans. Bibliographie der internationalen medizinischen Kongresse und Verbände. Leipzig: Harrassowitz, 1939. 280p. (His Bibliographie der internationalen Kongresse und Verbande in der preussischen Staatsbibliothek, Bd I Medizin.)

This checklist constitutes the first volume of a contemplated bibliography of national and international congresses which will probably consist of ten volumes and include many subjects. So far only this volume on medical congresses has been completed. Arranged under subject of the congress in German, with an index of the subject key words in all languages used. Complements the lists of the *Index-Catalogue* (no. 104) and the *International congresses* (no. 164) Out of print.

SEE ALSO "Congresses: tentative chronological and bibliographical reference list, *Index Catalogue* (no. 104) Paris. Université Bibliothèque. *Catalogue* (no. 150)

BIBLIOGRAPHIES FOR THE HISTORIAN

Histories of bibliography

167

Brodman, Estelle. The development of medical bibliography [Baltimore] Medical Library Association, 1954 226p. (Medical Library Association, Publication no. 1)

An excellent study devoted to general medical bibliographies with list of 255 appearing since 1500. Obtainable from the Association, 1211 Cathedral St., Baltimore 1 Md.

168

Fulton, John F The great medical bibliographers; a study in humanism. Philadelphia. Univ of Pennsylvania Pr 1951 107p. (Yale University School of Medicine. Library Historical Library Publication no. 28 [wrongly numbered 26])

Brief essays with helpful appendixes and illustrations. A publication of the Rosenbach Fellowship in Bibliography

169

Thornton, John L. Medical books, libraries and collectors; study of bibliography and the book trade in relation to the medical sciences. London: Grafton, 1949 293p.

An introduction to the subject for the novice, not an exhaustive study Forms readable chronologic bibliography of the important contributions to medical knowledge. Chronologic lists of medical societies and institutions and of medical libraries. Bibliography

170

Viets, Henry R. "The bibliography of medicine, *Bulletin of the Medical Library Association* 27 (December 1938) 105–17

Gives detailed information concerning early medical bibliographies, and lists many which have been superseded and are therefore not included below

Bibliographies for the historian

The many valuable general bibliographies which ar indispensable to the historian may be easily found in a convenient general library These works are carefully described in C. M. Winchell' *Guide* and need not be repeated here except for few which are the most useful Bibliothèque Nationale, *Catalogue* British Museum, *Catalogue of the book manuscripts maps and drawings (natural history)* British Museum, *General catalogue of printed books*: J. C. Brunet, *Manuel du libraire* J G T Graesse, *Trésor d livres rares* A. Palau y Dulcet, *Manual del librero hispano-americano* A. W Pollard and G R. Redgrave, *A short-title catal gue of books printed in E gland 1475–1640* and the *Checklist of American copies of Short-title catalogue" book* compiled by W W Bishop: Robert Watt, *Bibliotheca Britannica*, and Donald Wing, *Short-title catalogue of books printed in England 1641–1700*

Unless otherwise noted the bibliographies described here contain literature from the early days of printing through the date of publication.

171

Choulant, Johann L. Handbuch der Bücherkunde für die ältere Medicin. 2. Aufl. Leipzig: Voss, 1841. 434p.

V. 1 of his proposed *Geschichte und Literatur der ältern Medicin* containing biographic and historical notes as well as lists of editions of the works of the early Greek, Latin and Arabian writers. Reproduced Leipzig, W. Helms, 1911; München, Verlag d. Münchner Drucke, 1926.

172

Morton, Leslie T. Garrison and Morton's medical bibliography: an annotated check list of texts illustrating the history of medicine. 2. ed. London: Grafton, 1954. (New York: Argosy 1954.) 655p.

This comprehensive and valuable work supersedes the lists of F. H. Garrison which appeared in the *Index-Catalogue* 2. ser. 17 (1912) 89–179, and as his "Revised students' checklist" in the *Bulletin of the Institute of the History of Medicine* 1 (November 1933) 333–434. A necessary volume for any medical historical collection, or for any medical collection. Of the 6,808 entries, about 3,800 come from Garrison checklist. Arranged by broad subjects, with outstanding contributions listed chronologically followed by histories. Recent works are included. Contains many useful annotations, list of periodicals devoted to the history of medicine, name and subject indexes. The section of general histories of medicine includes those by period and locality.

173

Hahn, Lucien. Essai de bibliographie médicale; étude analytique des principaux répertoires bibliographiques concernant les sciences médicales. Paris: Steinheil, 1897. 206p.

Excellent classified and annotated list containing general as well as medical, historical, biographic, and bibliographic works.

174

Haller, Albrecht von. Bibliotheca medicinae practicae. Basel: Schweighauser, 1776–88. 4v.

This and the other Haller bibliographies are remarkable for covering the entire field of medical literature up to the time of publication. It is seldom that the most insignificant item is not to be found there. Useful for number of editions cited, Haller's notations, and the inclusion of obscure authors and their writings. Arranged chronologically. No subject index and inaccurate author index. Addenda. SEE ALSO no. 637, 799, and 1785.

175 ★

Kelly, Emerson C. Encyclopedia of medical sources. Baltimore: Williams & Wilkins, 1948. 476p.

List by author's name of medical syndromes, signs, test methods, and discoveries, with full references. Very useful.

176

Manget, Jean J. Bibliotheca scriptorum medicorum veterum et recentiorum. Geneva: Perachon & Cramer, 1731. 4 pt. in 2v.

Biographic notes, synopsis of contents, or lengthy quotations from books and periodical articles cited are frequently given. More useful in these respects than Haller (no. 174) although not so comprehensive.

177

Mayer, Claudius F. "Bio-bibliography of sixteenth century medical authors," issued as supplement to the *Index-Catalogue* (no. 104) beginning with 4. ser. 6 (1941).

Section A: A catalog of all works, including later editions, of sixteenth-century medical authors, with copies of their works in the Army Medical Library carefully described and copies in other libraries noted. Particularly helpful are the authors' biographic sketches. Only A-Alberti has appeared. If the compiler completes this section, he plans also Section B: Editions of ancient and medical authors published in the sixteenth century; and Sections C and D: Appendices and Indices, containing lists of great use to historians. This work, of tremendous scope, will be of incalculable value if resumed.

178

Pauly, Alphonse. Bibliographie des sciences médicales. Paris: Tross, 1874. 1,758 columns.

A useful and exhaustive work divided into sections on bibliography (general, medical, by period, by country, by subject, manuscripts); biography (including those of individuals); history (general, medical and by subject); epidemics; medical geography. Cites both articles and books.

179

Ploucquet, Wilhelm G. Literatura medica digesta sive repertorium medicinae practicae, chirurgiae atque rei obstetriciae. Tubingae: sumpt. J. G. Cottam, 1808–09. 4v. Cont. et suppl. I. Tubingae: apud auctorem, 1813. 226p.

Excellent subject catalog of early medical works, particularly helpful in tracing earliest descriptions or case histories in such works as the sixteenth-century compilations of "Consilia" and "Epistolae." Medical

paper published in early scientific journals also listed. A necessary work for the historian seeking the earliest *records of his subject.* This edition comprises the material in the earlier edition, *Index bibliotheca medico-practicae et chirurgicae* 1793–97 with its continuation and supplement, 1799–1803.

Lists of early periodicals

180

Billings, John S. "The medical journals of the United States," *Boston Medical and Surgical Journal 100* (January 2 1879) 1–14 108.

A study of the development of the early journals. Arranged chronologically under each state. Names of editor and full cataloging information. Supplemented by "The American medical journal of the future as indicated by the history of medical journals in the past," *J Amer med Ass 2* (June 14 1884) 650–57 an article by Leartus Connor which covers the period from 1878 to 1884 and by Myrl Ebert's covering 1797–1850 (no. 181)

181

Ebert, Myrl. "Rise and development of the American medical periodical, 1797–1850," *Bulletin of the Medical Library Association 40* (July 1952) 243–76.

Discussion of the most important journals, with a chronologic list and title index. A useful contribution.

182

Garrison, Fielding H. "The medical and scientific periodicals of the 17th and 18th centuries with a revised catalogue and check list," *Bulletin of the Institute of the History of Medicine 2* (July 1934) 285–343.

An excellent study of the early development of periodicals. The items published in the seventeenth century are listed chronologically in two lists, medical and scientific. The medical periodicals and transactions of the eighteenth century are classified by subject, subdivided by decade. The entire checklist is arranged in 21 sections, the last section is an alphabetic index of medical journals in sections 1–10.

183

Sudhoff, Karl F. J. "Das medizinische Zeitschriftenwesen in Deutschland bis zur Mitte des 19. Jahrhunderts," *Münchener medizinische Wochenschrift 50* (March 17 1903) 455–63.

Historical discussion of development of medical periodicals in Germany. Includes checklist with detailed information. Chronologic arrangement. It is continued by von Brunn (no. 144)

SEE ALSO LeFanu (no. 146)

Library catalogs

For a more complete list of catalogs of libraries of institutions and individuals, see the *Index-Catalogue* (no. 104) Series I and II under "Bibliography Medical, Catalogues of public libraries" and "Bibliography Medical, Catalogues of private libraries."

The *Index-Catalogue* is of course indispensable to any medical historical collection, not only for the large number of early medical works it includes, but also for the bibliographic, biographic, and historical material indexed therein. The main entry (no. 104) provides a detailed description.

184

Cushing, Harvey. The Harvey Cushing collection of books and manuscripts. New York. Schuman, 1943. 207p. (Yale University School of Medicine. Library. Historical Library Publication no. 1)

Checklist of manuscripts, Orientalia, incunabula, general works, Cushing memorabilia, now in the Historical Library, Yale Medical Library.

185

France. Bibliothèque Nationale. Département des Imprimés. Catalogue des sciences médicales. Paris: Didot, 1859–89. 3v.

Library called Bibliothèque Impériale in [illegible]. An expensive work, and difficult to use since there is no index. Useful to the student who wishes to survey medical publications chronologically by subject. Table of contents in each volume.

186

Nederlandsche Maatschappij tot Bevordering der Geneeskunst. Bibliotheek. Catalogus. Amsterdam: *Internationaal Antiquariaat,* [1930] 659p. Suppl. 1. Amsterdam: de Bussy, 1935. 39p. Suppl. 2. Amsterdam: van Campen, 1940. 71p.

Checklist of a large medical library. Particularly useful for Dutch medical works.

187

Osler, Sir William. Bibliotheca Osleriana. Oxford: Clarendon Pr., 1929. 785p.

Valuable for its accuracy and for the annotations by author and editors. Source for dates of authors cited. The most important contributions appear in "Bibliotheca prima," the less notable in "Bibliotheca secunda." Others arranged under Litteraria, Historica, Biographica, Bibliographica, Incunabula and

Manuscripts. Collection now at McGill University

188

Putti, Vittorio. La raccolta Vittorio Putti, antiche opere di medicina, manoscritte, stampate lasciate all'Istituto Rizzoli di Bologna. Milano: Istituto Grafico Bertieri, 1943. 107p.

Annotated catalog of 17 manuscripts and checklist of 1,141 printed books, plus list of autographs of physicians and scientists.

189

Royal College of Physicians of Edinburgh. Library Catalogue. Edinburgh. Clark, 1863 64p.

Checklist.

190

Royal College of Physicians of London Library Catalogue. London: Spottiswoode, 1912. 1,354p.

Checklist only but contains such useful lists as those of the Harveian orations, Goulstonian lectures, and pharmacopoeias. Occasionally cites biographic references.

191

Royal Medical and Chirurgical Society of London. Library Catalogue. London. The Society 1879 3v Suppl. 1 7 1880–93.

Checklist of large collection now in Royal Society of Medicine. Also contains such lists as noted in preceding entry

192

University of Glasgow Hunterian Museum The printed books in the library of. A catalogue prepared by Mungo Ferguson with a topographical index by David B Smith. Glasgow: Jackson Wylie, 1930. 396p.

Checklist of part of William Hunter' collection. N additional index.

see also Ballard (no. 193); College of Physicians of Philadelphia (no. 196) Dawson (no. 197); Duveen (no. 618) Friedenwald (no. 1667) Mead (no. 203) Orr (no. 1789); Schullian and Sommer (no. 206); University of Glasgow (no 209 and 619); Weinberger (no. 935)

Incunabula and manuscripts

With one exception, general bibliographies of fifteenth-century books are not listed here, as full descriptions are supplied by Winchell, by F H. Garrison's "Progress in the cataloguing of medical incunabula (no. 700) and by M B. Stillwell' *Incunabula* (no. 217) For checklists of incunabula in American medical collections consult *Annals of Medical History* new ser 2–4 (1930–32) where they are listed in the index under "Incunabula. De Ricci and Wilson's *Catalogue* is included here although it is not medical, for it does not appear in Winchell. Published too late for inclusion in this list is *A catalogue of incunabula in the Wellcome Historical Medical Library* by F N. L. Poynter London. Oxford Univ Pr 1954 159p., with 610 entries and 22 fragments.

193

Ballard, James F A catalogue of the medieval and Renaissance manuscripts and incunabula in the Boston Medical Library Boston Privately printed, 1944. 246p.

Catalog of 52 manuscripts, including nine Hebrew and 654 incunabula. Manuscripts thoroughly described when not already listed elsewhere. Collations omitted when available in other bibliographies. Bibliographic references and subject indexes.

194

Bibliographical Society of America. Incunabula in American libraries, ed. by M. B. Stillwell. New York: The Society 1940. 619p.

A second census of incunabula owned in the United States, Canada, and Mexico. A necessary volume for determining location of copies. Variant author forms and entries, concordances, addenda, t end of olume.

195

Choulant, Johann L. Graphische Incunabeln für Naturgeschichte und Medicin. Leipzig: Weigel, 1858. 168p.

Source book for illustrated medical incunabula. Reprinted (München: Verlag der Münchner Drucke, 1924)

196

College of Physicians of Philadelphia. Library "Census of incunabula in College | *Physicians of Philadelphia Transactions and Studies* 4 ser 6 (September 1938) 159–93.

Checklist of 409 editions, citing bibliographic references

197

Dawson, Warren R. Manuscripta medica, descript catalogue of the manuscripts in the Library of the Medical Society of London. London Bale, Sons & Danielsson, 1932. 140p.

Annotated catalog with detailed contents notes.

198

De Ricci, Seymour, and Wilson, William J Census of medieval and Renaissance manuscripts in the United States and Canada. New York: Wilson, 1935–40. 3v

Annotated catalog of the holdings of libraries arranged by state. Third volume contains index of names and titles, of scribes, illuminators, and cartographers, of incipits, of owners.

199

Diels, Hermann. Die Handschriften der antiken Ärzte. Berlin: (K.) Akademie der Wissenschaften, 1905–06. 158+115p.

Pt. 1: Hippocrates and Galen. Pt. 2: other Greek physicians. Checklist of manuscripts throughout Europe. With useful bibliography of catalogs and articles on the subject arranged by country.

200

Garrison, Fielding H. "Progress in the cataloguing of medical incunabula," *Bulletin of the New York Academy of Medicine* 2. ser. 6 (June, 1930) 365–435.

Contains detailed notes on the most important bibliographies of incunabula with checklist of 446 editions in the Army Medical Library. The checklist now superseded by Schullian and Sommer (no. 206).

201

Klebs, Arnold C. Incunabula scientifica et medica. Bruges: St. Catherine Pr., 1938. 359p. (History of medicine series, issued under the auspices of the Library of the New York Academy of Medicine, no. 1) Repr.: *Osiris 4* (1937) pt. 1.

Checklist with contents listed and with references to bibliographic descriptions of each edition. Necessary volume for historical medical collection.

202

Klebs, Arnold C. and Sudhoff, Karl. Die ersten gedruckten Pestschriften. München: Verlag der Munchner Drucke, 1926. 222p.

Bibliography chronologic first, historical sketch, facsimiles of works on plague.

203

Mead, Herman R. "Incunabula medica in the Huntington Library," *Huntington Library Bulletin 1* (1931) 107–51.

Checklist of 532 incunabula, citing bibliographic references.

204

Osler, Sir William. Incunabula medica: a study of the earliest printed medical books, 1467–1480. [Oxford]: Bibliographical Society, 1923. 140p. (Illustrated monographs issued by the Bibliographical Society, no. 19)

"Bibliographical list" of 217 editions, edited by Victor Scholderer with long informative study.

205

Sarton, George A. L. "The scientific literature transmitted through the incunabula," *Osiris 5* (1938) 41–245.

Particularly useful appendixes containing the most popular authors of scientific incunabula; the best sellers: anonymous scientific incunabula; chronologic list of authors whose scientific works were printed before 1501.

206

Schullian, Dorothy M., and Sommer, Francis E. A catalogue of incunabula and manuscripts in the Army Medical Library. New York: H. Schuman for the Honorary Consultants of the Army Medical Library [1950]. 361p.

Catalog by Schullian of 490 incunabula and 36 western manuscripts before 1501. All are available on microfilm from the Armed Forces Medical Library. Collations of incunabula omitted when available elsewhere. Bibliographic references and detailed descriptions of copies. Manuscripts more fully annotated and contents given. Index includes place names, printers, owners, with index by date. No subject index. Sommer's catalog with fully described entries includes 92 Arabic, 28 Persian, 9 Turkish, 7 Singhalese, and 1 Hebrew manuscript arranged by transliterated titles. This supersedes "Collection of incunabula and early medical prints in the Library of the Surgeon General's Office, U.S. Army," *Index-Catalogue* (no. 104) 3. ser. *10* (1932) 1415–36, which contains descriptions of 449 incunabula with bibliographic references, as well as books printed 1501 to 1525. This earlier catalog, largely the work of F. H. Garrison, contains the list which appeared in his "Progress in the cataloguing of medical incunabula" (no. 200).

207

Sudhoff, Karl. "Deutsche medizinische Inkunabeln," *Studien zur Geschichte der Medizin* 2/3 (1908) 278p.

Carefully annotated, arranged by subject. Includes some editions later than 1500.

208

Thorndike, Lynn, and Kibre, Pearl. A catalogue of incipits of mediaeval scientific writings in Latin. Cambridge, Mass.: Mediaeval Academy of America, 1937. 926p. Suppl.: *Speculum 14* (1939) 93–105; *17* (1942) 342–66; *26* (1951) 673–95. (Mediaeval Academy of America, Publication no. 29)

Excellent source for identifying texts from their incipits.

209

University of Glasgow Hunterian Museum. A catalogue of the manuscripts in the library of ... Glasgow: Maclehose, 1908. 566p.

Annotated catalog includi g over 150 oriental manuscripts.

American medicine

210

"Bibliography of the history of medicine in the United States and Canada. *Bulletin of the History of Medicine* 1940+.

Annual checklist arranged by subject of books and articles appearing in nonmedical as well as medical sources. Reprints provide useful tool. Especially good for local material.

211

Gilbert, Judson B. A bibliography of articles on the history of American medicine compiled from "Writings on American history 1902-1937. New York. New York Academy of Medicine, 1951. 44p. (History of Medicine Series, issued under the auspices of the Library of the New York Academy of Medicine, no. 9.)

Supplements the "Bibliography of the history of medicine" (no. 210) covering years before it was published, and arranged by subject in accordance with it.

Manuals of bibliography

Of the many useful volumes only a few may be cited here. Those listed below are works that are inexpensive and of constant use. Indexes of Latin place names are well described in such volumes as Winchell and Minto. Books on various aspects of bibliographic problems which the medical librarian would need to consult only occasionally may also be found in those sources. Some of the most useful are noted in the text of Chapter 12.

212

Bowers, Fredson. Principles of bibliographical description. Princeton: Princeton Univ Pr 1949 505p.

Not for the tyro, but excellent for the advanced student.

213

Cappelli, Adriano. Cronologia, cronografia e calendario perpetuo. 2. ed. Milano: Hoepli, 1930. 566p.

Includes old Roman calendar, that of the French Republic, historical chronologies of European countries, etc.

214

——Lexicon abbreviaturarum. 2. ed. Leipzig: Weber, 1928. 543p.

Most useful dictionary of contractions employed in the Middle Ages. Consult Winchell for further particulars.

215

Dunkin, Paul S. How to catalog a rare book. Chicago: American Library Association, 1951. 85p.

A simplified manual for the librarian unfamiliar with the subject. Not for the advanced student. Chapter on title page transcription not applicable to most scientific collections.

216

McKerrow, Ronald B. An introduction to bibliography. Oxford: Clarendon Pr 1927 359p.

Excellent and necessary manual for the physical description of early printed books. This should be the starting point for any who wish to study the subject.

217

Stillwell, Margaret B. Incunabula and Americana, 1450–1800: a key to bibliographical study. New York: Columbia Univ Pr 1931 483p.

Necessary manual for the cataloger of incunabula. Useful for many points not covered by other works. Lengthy lists of bibliographic reference works on subjects indicated. Medical subjects included under bibliographies of incunabula are anatomy, drugs, herbals, hygiene, and pestilence.

BIOGRAPHIES

Bibliographies

218

Garrison, Fielding H. Available sources and future prospects of medical biography. *Bulletin of the New York Academy of Medicine* 2. ser. 4 (May 1928) 586–607.

Helpful lists of works which include biographic material, arranged by countries. Also contains lists of general medical biographic collections, biographies of individual men, and dictionaries of anonymous and pseudonymous works. A large part of the books mentioned are outside the scope of a small collection.

219

Russo, Erna. "Establishing personal author entries in a medical library." *Bulletin of the Medical Library Association* 39 (Jan., 1951) 40–52.

Annotated catalog of the holdings of libraries arranged by state. Third volume contains index of names and titles, of scribes, illuminators, and cartographers, of incipits, of owners

199
Diels, Hermann. Die Handschriften der antiken Ärzte. Berlin (K.) Akademie der Wissenschaften, 1905–06. 158+115p.
Pt. 1 Hippocrates and Galen. Pt. 2 other Greek physicians. Checklist of manuscripts throughout Europe. With useful bibliography of catalogs and articles on the subject arranged by country

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Garrison, Fielding H. "Progress in the cataloguing of medical incunabula." *Bulletin of the New York Academy of Medicine* 2. ser 6 (June, 1930) 365–435
Contains detailed notes on the most important bibliographies of incunabula with checklist of 446 editions in the Army Medical Library. The checklist now superseded by Schullian and Sommer (no. 206)

201
Klebs, Arnold C. Incunabula scientifica et medica. Bruges, St. Catherine Pr 1938. 359p. (History of medicine series, issued under the auspices of the Library of the New York Academy of Medicine, no. 1) Repr *Osiris 4* (1937), pt. 1.
Checklist with contents listed and with references to bibliographic descriptions of each edition. Necessary volume for historical medical collection.

202
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Bibliography, chronologic list, historical sketch, facsimiles of works on plague.

203
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204
Osler, Sir William. Incunabula medica, a study of the earliest printed medical books, 1467–1480. [Oxford] Bibliographical Society 1923. 140p. (Illustrated monographs issued by the Bibliographical Society no. 19)
"Bibliographical list" of 217 editions, edited by Victor Scholderer with long informative study

205
Sarton, George A. L. "The scientific literature transmitted through the incunabula." *Osiris 5* (1938) 41–245
Particularly useful appendixes containing the most popular authors of scientific incunabula, the best sellers, anonymous scientific incunabula; chronologic list of authors whose scientific works were printed before 1501.

206
Schullian, Dorothy M., and Sommer, Francis E. A catalogue of incunabula and manuscripts in the Army Medical Library. New York. H. Schuman for the Honorary Consultants of the Army Medical Library [1950] 361p.
Catalog by Schullian of 490 incunabula and 36 western manuscripts before 1501. All are available on microfilm from the Armed Forces Medical Library. Collations of incunabula omitted when available elsewhere. Bibliographic references and detailed descriptions of copies. Manuscripts more fully annotated and contents given. Index includes place names, printers, owners, with index by date. No subject index. Sommer's catalog with fully described entries includes 92 Arabic, 28 Persian, 9 Turkish, 7 Singhalese, and 1 Hebrew manuscript arranged by transliterated titles. This supersedes "Collection of incunabula and early medical prints in the Library of the Surgeon General's Office, U.S. Army," *Index-Catalogue* (no. 104) 3. ser *10* (1932) 1415–36, which contains descriptions of 449 incunabula with bibliographic references, as well as books printed 1501 to 1525. This earlier catalog, largely the work of F. H. Garrison, contains the list which appeared in his "Progress in the cataloguing of medical incunabula" (no. 200)

207
Sudhoff, Karl. "Deutsche medizinische Inkunabeln." *Studien zur Geschichte der Medizin 2–3* (1908) 278p.
Carefully annotated, arranged by subject. Includes some editions later than 1500.

208
Thorndike, Lynn, and Kibre, Pearl. A catalogue of incipits of mediaeval scientific writings in Latin. Cambridge, Mass.: Mediaeval Academy of America, 1937. 926p. Suppl. *Speculum 14* (1939) 93–105; *17* (1942) 342–66; *26* (1951) 673–95. (Mediaeval Academy of America, Publication no. 29)
Excellent source for identifying texts from their incipits.

d science. Enciclopedia universal ilustrada Europeo-Americana. L. Ferrari, Onomasticon, repertorio biobibliografico degli scrittori italiani dal 1501 al 1850. C. G. Jöcher, Allgemeines Gelehrten-Lexikon. P. A. Larousse, Grand dictionnaire universel. Nieuw nederlandsch biografisch woordenboek. Girolamo Tiraboschi, Storia della letteratura italiana. new ed. (Firenze: M. Landi, 1805–13) 9v. in 10, which contains brief biographic sketches of many medical men as well as discussion of their work. (Winchell does not enter Tiraboschi)

227

Dezeimeris, Jean E., Ollivier, Charles P. and Raige-Delorme, Jacques. Dictionnaire historique de la médecine ancienne et moderne. Paris. Béchet Jeune, 1828–39. 4v.

A biographic encyclopedia particularly helpful for bibliographies of authors cited. Sketches longer than those in the *Biographisches Lexikon* (no. 220) and cites men not included in Jourdan. *Biographie médicale* (no. 229)

228

Eloy, Nicolas F. J. Dictionnaire historique de la médecine. Mons: Hoyois, 1778. 4v.

Early collection of biographies, still useful, especially for early French authors and their works. It forms the basis for some of the later collections.

229

Jourdan, Antoine J. L., ed. Biographie médicale. Paris: Panckoucke, 1820–25. 7v. (Supplement to: Dictionnaire des sciences médicales, par une société de médecins et de chirurgiens. Paris: Panckoucke, 1812–22. 60v.)

Contributions by nearly 100 authors, under the general editorship of Jourdan. Was intended to be an exhaustive compilation for medical men of all times and places. Callisen (no. 88) v. 23, p.501 states that the first volumes were carried out on that scale, but that the entire work, as published, fell far short of the original plan. Sketches are longer than those in the *Biographisches Lexikon* (no. 220). Include names not in Eloy (no. 228) or in Dezeimeris (no. 227). Contains occasional encyclopedic historical articles on various classes of medical men, such as Anatomists.

Biographic sketches

230

Bailey, Hamilton, and Bishop, William J. Notable names in medicine and surgery: short biographies of some of those whose discoveries (not necessarily the greatest medical discoveries) have become eponymous in the medical and allied professions. 2. ed. London: Lewis, 1946. 202p.

231

Doolin, William. Wayfarers in medicine. London: Heinemann, 1949. 284p.

First published in 1947 these essays in entertainment deal with outstanding figures from Imhotep to Gorgas. With bibliography

232

Médecins (Les) célèbres. [Genève] Éditions d'Art, L. Mazenod, [1947] 371p. (La galérie des hommes célèbres; collection dirigée et présentée par L. Mazenod.)

Eighty-two fine reproductions of portraits of outstanding physicians from Imhotep to Cushing, with biographic sketches. A useful appendix lists celebrated physicians by period, locality and specialty

233

Richardson, Sir Benjamin W. Disciples of Aesculapius. New York: Dutton, 1901. 2v.

Readable and detailed biographies illustrating phases in the history of medicine. Originally published in the *Asclepiad*. London, 1884–95, v. 1–11.

234

Robinson, Victor. Pathfinders in medicine. 2. ed. New York: Medical Life Pr., 1929. 810p. (Historia medicinae, no. 3. Library of Medical History, no. 4.)

Popular biographies reprinted for the most part from periodicals.

235

Rosen, George, and Caspari-Rosen, Beate, eds. 400 years of a doctor's life. New York: Schuman, [1947] 429p.

Excerpts of autobiographies of medical men from Paracelsus to Seagrave, arranged by sections: early years; school days; the medical student; the practice of medicine; scientist, scholar, teacher; the doctor marries; the doctor as patient; the doctor goes to war; writing and politics; reflections on life and death. Foreign material translated into English. With bibliography

236

Schweizerische Landesbibliothek. Recherches, découvertes et inventions de médecins suisses. [Exposition de livres et de documents manuscripts.] Edité par la Ciba Société Anonyme. [Bâle: Ciba Société Anonyme, 1946.] 137p.

Brief biographic sketches of 60 men, with portraits and bibliographies. Index of men

by their subjects, such as Anatomie; Anatomie pathologique; Anthropologie.

237

Sigerist, Henry E. The great doctors. Tr by E. and C. Paul. From the 2. German ed. New York: Norton, [1933] 436p.

Popular biographies.

National biographies

SEE ALSO Science—Biographies.

A more extended list of foreign medical directories than can be given here will be found in Irene Strieby's A check list of foreign directories of medical and some allied professions 1930-1940, *Bull med Libr Assn.* 28 (June, 1940) 305-18. Biographies of both current and historical interest have been grouped together in the list that follows.

Arabia

238

Wüstenfeld, Ferdinand. Geschichte der arabischen Aerzte und Naturforscher. Göttingen: Vandenhoeck & Ruprecht, 1840. 167p.

Very brief biographies, with bibliographies of men who lived before 1000 A.D. Useful chiefly for identifying obscure men.

SEE ALSO Sarton (no. 50)

Argentina

239

Aráoz Alfaro, Gregorio. Crónicas y estampas del pasado. Buenos Aires: Librería El Ateneo, 1938. 363p.

Biographies of some 30 notable nineteenth-century Argentine doctors, with the historical background of the period.

240

Cranwell, Daniel J. Nuestros grandes médicos: Rafael Herrera Vegas, Pedro N. Arata, los Ayerza, Roberto Wernicke, Luis Güemes, Pedro Lagleyze, Angel M. Centeno. Buenos Aires: El Ateneo, 1937. 179p.

Biographies of nine Argentinian physicians of the twentieth century.

Australia

SEE Who's who in British science (no. 30.1)

Brazil

241

Rebêlo Meira, Domingos A. Medicos de outr'ora. [São Paulo: Estab. Graphico Atlantico] 1937. 251p.

Personal impressions of over 100 São Paulo physicians, deceased.

242

Senna, Lucio O. N. de. Médicos mineiros no Brasil-Colônia, no Império e na República. Rio de Janeiro: AGIR, 1947. 119p.

Biographies of some 500 physicians born in Minas Gerais, Brazil, from colonial times through the nineteenth-century. Arranged by period, then alphabetized by given name. Personal and professional data.

Canada

243

Ahern, Michael J. and Ahern, George. Notes pour servir à l'histoire de la médecine dans le Bas-Canada depuis la fondation de Québec jusqu'au commencement du XIX^e siècle. Québec: [Imprimerie Laflamme] 1923. 563p.

Well-documented sketches—some lengthy—with quotations from contemporary material.

244

Canadian medical directory: register of physicians, dentists and druggists of the Dominion of Canada. Montreal: Canadian National Pub. Co., v.1-16, 1918-34.

In 1936 a new edition was announced to be published in eight parts (having previously appeared in one volume) with the title *Canadian medical directories.* Of these, only one part, "Ontario," has appeared.

SEE ALSO Who's who in British science (no. 30.1)

Ceylon

SEE Who's who in British science (no. 30.1)

Cuba

245

Academia de Ciencias Médicas, Físicas y Naturales de La Habana. Índice biográfico de los miembros. La Habana: Compañía Editora de Libros y Folletos, 1942. 35p.

List of some 400 members of the Academy of Sciences in Havana, Cuba, from its beginning in 1861, with brief biographic notes.

Denmark

246

Danske Laegers memoirer, samlet og udgivet af Anker Aggebo. København, v.1- 1936-

V. 1-2, 1936-37 as Aeklepie. Tyverre. Biographies of eight to ten Danish physicians per volume. Volumes supplement each other; are not revisions. Issued irregularly.

247
Den danske lægestand, 1936–1949. 12. udg. ved. Povl Engelstoft og V. A. Fenger. Udgivet af den Almindelige Danske Lægeforening. København: Lund, 1949. 839p.
A medical biographic dictionary for Denmark, Iceland, and Greenland of individuals living in 1949 or who died since the previous edition. Early editions compiled by Kristian Frederik Carøe who covered the period from 1479 to his own time. Genealogical and professional data, and, for nearly all, portraits. Chronologic index. 11. ed. issued 1936.

Esthonia

248
Brennsohn, Isidorus. Die Aerzte Estlands vom Beginn der historischen Zeit bis zur Gegenwart. Riga: Neimer, 1922. 550p.

Federation of Malaya

SEE *Who's who in British science* (no. 30.1)

Finland

249
Bergholm, Hjalmar. Suomen lääkärit, Finlands läkare: biographies, 1927. Tammerfors, [Finland: Tampereen Kirjapaino-Osakeyhtiö] 1927. 603p.
Biographies and bibliographic information on living Finnish doctors. Personal and professional data.

249.1
Finska läkaresällskapets ordförande, 1835–1935 compiled by Axel von Bonsdorff. [Helsingfors: Mercator, 1931–1935] 90 separate plates (ports.) in portfolio.
Excellent portraits of the presidents of the Finnish Medical Society from 1835 to 1935. Data (in Swedish) on each portrait includes full name, dates of birth and death and of incumbency as president. Also chronologic listing of the presidents.

250
Heikel, Per E. Suomen lääkärit—Finlands läkare 1952. Helsingfors: Suomen Lääkäriliitto, 1953. 1,251p.
Brief biographies, with bibliographies and many photographs, of living Finnish physicians.

France

251
Académie de Médecine. Index biographique des membres, des associés et des correspondants ... de décembre 1820 à juillet 1939. Paris: Masson, 1939. 145p.
List of entire membership 1820–1939. Gives full name, place and date of birth and death, and offices held in the Académie. A chronologic table shows date of death and replacement by new member. Particularly useful for nineteenth-century French names. Still in print.

252
Aux médecins morts pour la patrie (1914–1918): livre d'or des médecins morts pour la patrie. Paris: Alcan, [1922]. 446p.
A description of the French Medical Corps during World War I, 1914–18. Chiefly obituary notices of physicians killed in the war giving only brief note of education, military record, and dates of birth and death. Useful for names hard to obtain elsewhere.

253
Les biographies médicales; notes pour servir à l'histoire de la médecine et des grands médecins; commencées par P. Busquet et A. Gilbert. Paris: Baillière, [1926(?)]+ ... 1+
Each monthly issue contains the brief biography of usually ... single member of the Académie de Médecine, giving personal and professional data, several portraits with lists of others, a facsimile of handwriting, and lists of works by and about him. Nineteenth and twentieth centuries are represented. No plan of arrangement and no index.

254
Dartigues, Louis. "Vies-morts: biographies, nécrologies. In his *Faucons scriptural*. Paris: Doin, 1932. ... 3, p.275–825
Brief biographies of ... hundred-odd contemporary medical men, chiefly French. Still in print.

SEE ALSO Eloy (no. 228)

255
Wickersheimer, Charles A. E. Dictionnaire biographique des médecins en France au moyen âge. Paris: Droz, 1936. 2v.
Necessary source book for the medical medievalist, serving as index to biographic material with very brief biographic notices.

SEE ALSO Institut de France (no. 31 32) and Medicine—Histories, National—Belgium.

Germany SEE Kürschners (no. 33)

Great Britain

256
Crawford, Dirom G. Roll of the Indian Medical Service, 1615–1930. London: Thacker, 1930. 710p.
Very brief sketches. N... personal information, but dates of birth and death, military

career and bibliographies. Arrangement chronologic, by localities, with name index. Useful for obscure data.

257

Medical directory London, v 1 1845+

Part I London, Scotland, Wales, Ireland, Abroad, Navy Army and Air Force. Part II: Provinces, universities, medical schools, hospitals, and miscellaneous information. Earlier titles *London medical directory London and provincial medical directory* Dentists were included through 1924 Revised annually Each section is arranged by name with a geographic index. Gives full name, address, degrees, positions held, and bibliography Data are more complete than in the *Medical egister* (no 258) but acts of Parliament concerning health are not included. Includes lists of hospitals and medical societies, and the personnel of government and hospital staffs.

258

Medical egister Printed and published under the direction of the General Medical Council. London, 1859+

Revised annually Lists medical practitioners, colonial and foreign. Address, date and place of registration, and qualifications. Includes acts of Parliament concerning medicine and public health

259

The medical who' who. London. Grafton, 1912 25

Personal and professional data. Geographic index.

260

Munk, William The roll of the Royal College of Physicians of London comprising biographical ketches of all the eminent physicians, whose names are recorded in the annals from the foundation of the College in 1518 to its removal in 1825 from Warwick Lane to Pall Mall East 2. ed London The College, 1878 3v

The sketches vary widely in length, with usually incomplete bibliographies. Excellent source for obscure English physicians Arranged chronologically with name and subject index. Contains brief history of the College and its library with lists of lecturers, Harveian orators, and the College' Pharmacopoeias

261

Pettigrew Thomas J Medical portrait gallery; biographical memoirs of the most celebrated physicians, surgeons, etc., who have contributed to the advancement of medical science. London Fisher [1838-40] 4v

Chiefly English physicians with a few others. Sketches rambling. Personal and professional data. Especially good for last years of the eighteenth and first 25 years of the nineteenth centuries. Excellent portraits.

262

Power Si D'Arcy ed. British masters of medicine. London Medical Press & Circular 1936. 242p.

Laudatory biographies by various authors, reprinted from the *Medical Press & Circular* 1934-35

263

Royal College of Physicians of London. List of the fellows and members and of the licentiates and diplomates admitted during the year 1951 [London. The College] 1952. 443p

Presidents of the College, committees, and other information. List arranged by date of admittance, with geographic list and name ndex. Revised frequently

see also Royal Society of London (no. 34) *Who' who in British science* (no. 30.1)

Greece

see Sarton (no. 50)

India

see *Who' who in British science* (no. 30.1); Crawford (no. 256)

Italy

264

Arcieri, John P Figure della medicina contemporanea italiana. Milano· Fratelli Bocca, 1952. 350p

Biographies of 23 contemporary Italian physicians, with portraits

265

Capparoni, Pietro. Profili bio-bibliografici di medici naturalisti celebri italiani dal sec. XV° al sec. XVIII° Roma Istituto Naz. Medico Farmacologico, 1925-28. 2

Brief sketches with portraits and bibliographies.

266

Natalucci, Giuseppe. Medici insigni italiani, antichi, moderni e contemporanei nati nelle Marche e loro contributi clinico-scientifici. [F lerone, Italy· F Menicucci, 1935.] 222p.

Arranged by geographic region, each part contains data on eminent doctors born in those provinces. Useful in locating information on obscure but locally well-known physicians.

Japan

267

Kenjiro, Osada. "Life of Takano Nagahide; translated and edited by Daniel Crosby Greene, *Transactions of the Asiatic Society of Japan* Tokyo, *41* (August, 1913) pt. 3. 114p.

Includes biographies of 36 Japanese doctors of the sixteenth to nineteenth centuries. Based upon articles in the biographic dictionary *Dai Nihon Chimei Jisho*.

Jewish

SEE Friedenwald (no. 1667) Kagan (nos. 286, 287 1668)

Latvia

268

Brennsohn, Isidorus. Die Ärzte Kurlands om Beginn der herzoglichen Zeit bis zur Gegenwart. 2. Aufg. Riga. Plates, 1929 492p.

Includes historical sketches of medicine in Latvia and Lithuania. Short biographies of living and deceased physicians. Personal and professional data.

Lithuania

SEE Brennsohn (no. 268)

Mexico

269

Aguilar Gilberto F Heroes del dolor 2. ed. México, D.F Thun, 1946. 260p.

Brief biographies with portraits of 66 Mexican physicians

Netherlands

270

Banga, Jelle Geschiedenis van de geneeskunde en van hare beoefenaren in Nederland. Leeuwarden. Eekhoff 1868 2v

Well-documented biographies of physicians of the Netherlands, from Frisius to Boerhaave. Chronologic list with subject index.

New Zealand

SEE Who's who in British science (no 30 1)

Norway

271

Kobro, Isak. Norges laeger, 1800–1908. Kristiania Cammermeyer 1915–44. 2v

Biographies of Norwegian physicians and surgeons with portraits. Continued by Kobro (no. 271.1 and 272)

271 1

——Norges laeger 1800–1908 Tillegg Oslo: Aschehoug, 1944. 642p.

This supplement includes physicians licensed 1909–43 and additional data for the period 1800–1908.

272

——Norges laeger 1937–1946. Oslo: Aschehoug, 1951. 446p.

Biographies of Norwegian physicians with many portraits. Continues preceding (no. 271 and 271 1) There is also a directory of Norwegian physicians, *Fortegnelse over autoriserte laeger tannlaeger og veterinaerer i Norge* issued annually by the Helsedirektoratet of Norway

Pakistan

SEE Who's who British science (no. 30.1); Crawford (no. 256)

Sweden

273

Bexmarck, Fredrik G., ed. Biografisk matrikel över Svenska läkarkåren, 1934. Stockholm H. W Tullbergs Förlag, 1934. 875p.

Biographies, alphabetically arranged, of living licensed Swedish physicians. Personal and professional data.

274

Svenska Läkaresällskapet. Sveriges läkarehistoria ifrån Konung Gustaf den Is till närvarande tid. 4. Foljd. Stockholm: Norstedt, 1930–35. 5v

Comprehensive dictionary of Swedish medical biography Covers from 1822 to date of publication.

275

Widstrand, Axel, ed. Svenska läkare i ord och bild. Porträttgalleri med biografiska data over alla nu levande svenska läkare. 2. ed. Stockholm: Biografiskt Galleri, 1948. 842p.

Portraits and biographies of living physicians. No bibliographies. Continued by annual supplements.

Tunisia

276

Médecine et médecins de Tunisie de 1902 à 1952. [Tunis] Société des Sciences Médicales de Tunisie, [1952] 335p.

Published under the direction of Raoul Dana, Maurice Uzan, and Raymond Didier A history of the Société des Sciences Médi-

cales de Tunisie and of medicine in Tunisia since 1902, with many biographies and portraits.

Union of South Africa

see *Who's who in British science* (no. 30.1)

United States

277

American College of Physicians. Directory Philadelphia, 1923+

Revised biennially with supplement in alternate years (1951, 825p., and suppl., 1952, 93p.) Geographic list and alphabetic roster with brief biographies. Cumulative roster of officers and regents, 1916+ Necrology 1927+ V. 1–2, in *Yearbook*

278 *

American Medical Association. American medical directory: register of physicians of the United States, Alaska, Canal Zone, Hawaii, Puerto Rico, Guam, Virgin Islands, Canada, Yukon, Northwest Territories, and Labrador. Chicago, 1906+

Since 1942 revised irregularly. It is the most useful of the medical directories. Divided into three main parts: (1) National and interstate statistics and information, including constitution and by-laws of the American Medical Association; medical schools by state and a list of the principal foreign schools; the National Board of Medical Examiners and the boards in the medical specialties; list of hospitals approved for internship, and list of residencies and fellowships; medical libraries and medical journals of the United States and Canada; a list of medical officers of the Army, Navy and Public Health Service, and members of medical societies arranged by specialty. (2) Information arranged by state includes the laws governing public health and the practice of medicine; personnel of state, county and city health departments; officers of state medical societies; and hospitals and physicians listed by city. Full names, dates of birth and graduation, and memberships in societies are given. There is no list of specialists by subject other than the list of special society memberships in part 1. (3) A name index of physicians.

279

Atkinson, William B. The physicians and surgeons of the United States. Philadelphia: Robson, 1878. 788p.

Includes some less well known men not found in Kelly (no. 288–90). Especially good for the nineteenth century. Genealogic and professional data, and many fine portraits. Arrangement haphazard, but well indexed by name, locality and subject. A second edition, entitled *A biographical dictionary of contemporary American physicians and surgeons* (Philadelphia: Brinton, 1880) 747p. does not supersede this. Although it has some new biographies and revisions of others, it omits the portraits and subject index.

280

Bierring, Walter L. "Biographies of the presidents of the American Medical Association, 1847–1947." In: Fishbein, Morris, *A history of the American Medical Association*. Philadelphia: Saunders, [1947] p.567–830.

Good sketches with portraits.

281 * *

Directory of medical specialists holding certification by American Boards. Published for the Advisory Board for Medical Specialties. Chicago, v. 1, 1939+

Sketches arranged geographically under each board. Professional data only. 7 edition, 1955, 2,214p. is latest. Exceedingly useful.

282

Fitzfield, James C., comp. American physicians and surgeons: a biographical directory of practicing members of the medical profession in the United States and Canada. Including supplements in which are listed and classified the leading hospitals, sanitariums, and health resorts of both countries. Minneapolis: Midwest, [1931] 1,737p.

Contemporary physicians grouped by state and then by city. Subject list of specialists for each state. Limited to practitioners; no research workers or teachers. In no sense as comprehensive or useful as *Who's who in American medicine* (no. 295) or *Who's who among physicians and surgeons* (no. 296)

283

Flexner, James T. Doctors on horseback; pioneers of American medicine. New York: Viking Pr., 1937. 370p.

Carefully compiled and readable biographies of John Morgan, Benjamin Rush, Ephraim McDowell, Daniel Drake, William Beaumont, and an excellent sketch of the discovery of ether as an anesthetic.

284

Gross, Samuel D., ed. Lives of eminent American physicians and surgeons of the nineteenth century. Philadelphia: Lindsay & Blakiston, 1861. 836p.

Well-written articles on 32 important physicians of the last eighteenth century and the early nineteenth.

285

Jirka, Frank J. American doctors of destiny; a collection of historical narratives of the lives of great American physicians and surgeons whose service to the nation and to the world has transcended the scope of their profession. Chicago: Normandie House, [1940] 361p.

Readable sketches.

286

Kagan, Solomon R. American Jewish physicians of note; biographical sketches. Boston. Boston Medical Pub. Co., 1942. 304p.

Serves to supplement the author's *Jewish contributions to medicine in America* (no. 287) Includes many portraits and a list of major contributions by Jewish physicians.

287

——Jewish contributions to medicine in America from colonial times to the present. 2. ed. Boston: Boston Medical Pub. Co., 1939 792p.

Contains new printing of entire 1st edition, 1934 and a supplement, p. 554–792, with contemporary biographies, corrections, nd additions. Biographies grouped under specialties. Professional data only. Chapter on Jewish medical institutions.

288

Kelly Howard A. A cyclopedia of American medical biography comprising the lives of eminent deceased physicians and surgeons from 1610–1910. Philadelphia Saunders, 1912. 2v

The first edition of Kelly' famous work has not been entirely superseded by the later editions. (See notes for no. 289 and no. 290.) Various sketches have been deleted in the later editions, as have the historical notes on medical specialties in the United States.

289

Kelly Howard A., and Burrage, Walter L. American medical biographies. Baltimore Norman, Remington, 1920. 1,320p.

Revised edition of Kelly *Cyclopedia of American medical biography* (no. 288) Brings this work up to 1919. 31 biographies are deleted and 815 are added.

290

——Dictionary of American medical biography; lives of eminent physicians of the United States and Canada, from the earliest times. New York. Appleton, 1928 1 364p.

This really constitutes the third edition of the *Cyclopedia of American medical biography* (no. 288) and of *American medical biographies* (no. 289) Some material is included here that was not [ ] either of the other works and vice versa. Together they represent the best source books for American medical biography covering the period from the earliest times to 1927 Personal and professional information and bibliographies.

291

Mayo Clinic and Mayo Foundation. Physicians of the Mayo Clinic and Mayo Foundation. [3. ed.] Minneapolis: Univ of Minnesota Pr 1937 1,575p.

Contains full biographies, with bibliographies and portraits, of doctors and scientists (living and dead) connected with the Clinic or Foundation for one year or more. Less data given for those who tended less than year Has an index of universities and colleges from which degrees were received, and a geographic index of biographies.

292

Stone, Richard F ed. Biography of eminent American physicians and surgeons. Indianapolis. Carlon & Hollenbeck, 1894. 729p.

Especially good for last half of nineteenth century Personal and professional data. Bibliographies and many portraits. Should be used to supplement Kelly (no. 288–90)

293

Thacher James. American medical biography Boston Richardson, 1828. 2v

Necessary volume for the medical Americana collection. Has been much used as a source of information for later biographies. Contains brief history of medicine in United States, arranged by state.

294

W tson, Irving A., ed. Physicians nd surgeons of America collection of biographical sketches of the regular medical profession. Concord, N.H.: Republican Press Association, 1896. 843p.

Almost wholly a record of men then living: personal, professional, and bibliographic information; hundreds of portraits. Locality index

295 *

Who's who in American medicine, 1925 Eds. Loyd [sic] Thompson and W S. Downs. New York: Who's Who Publications, 1925. 1,820p.

Personal and professional data for general practitioners, specialists, and experts in sciences allied to medicine. A list of hospitals with their staff is given; list repeated by state. Also an index of individuals by state and city Should be used to supplement *W'h wh among physicians and surgeons* (no. 296)

296

Who who among physicians and surgeons ed. by J. C. Schwarz. New York: [The Editor] 277 Broadway 1 1938.

An authoritative biographic directory of contemporary American and Canadian men of medicine. Personal and professional data for over 12,000 practitioners, specialists, and scientists in subjects allied to medicine. Includes some, but not all, of the material in *Who wh in American medicine* (no. 295)

297

Williams, Stephen W American medical biography or memoirs of eminent physicians, embracing principally those who have died since the publication of Dr Thacher' work. Greenfield, Mass. Merriam, 1845 664p.

Should be used to supplement Thacher *American medical biography* (no. 293)

SEE ALSO American Association for the Ad ancement of Science (no. 35) *American men of science* (no. 36) *Directory of medi al women* (no 1940) N tional Academy of Sciences (no. 37)

HISTORIES OF MEDICINE

The small medical library cannot hope to own complete historical collection. The books listed below will serve only as an indication of what useful material may be found on gi en subject Limited space has dictated the omission of much that would be desirable. A brief summary of the material necessarily excluded follows (1) articles in periodicals (since these for the most part are accessible through the general indexes, only the most important, such as the contribution of F H. Garrison, ha been ncluded here) (2) early histories which have been superseded by later works (3) volumes whose scope is limited to a single phase of subject or to single locality (4) histories of individual institutions or organizations (5) histories other than those of medicine and allied sciences, such as local histories, genealogies, and volumes published by historical societies, which often provide obscure information not to be found in more comprehensive compilations. Garrison history of medicine (no. 311) p. 884-85 907-22, offers list of histories of medicine. The general indexes of medical literature should also be consulted for further olumes. Biographic works should not be neglected as sources of historical material.

Study and teaching

298

Artelt, Walter Einführung in die Medizinhistorik, ihr Wesen, ihre Arbeitsweise und ihre Hilfsmittel. Stuttgart: Enke, 1949 240p.

A manual for the serious student, with useful lists of reference books.

299

Garrison, Fielding H. "Developmental possibilities in medical history as a branch of the medical curriculum, *Bulletin of the New York Academy of Medicine* 2, ser 5 (August, 1929) 741-56.

300

Pazzini, Adalberto. Elementi propedeutici di storia della medicina. Roma, Società Editrice "Humanitas, [1944] 280p.

Particularly valuable for the teaching of the history of medicine and science in Italy With a chronology of the history of medicine arranged under broad subjects, bibliography and brief biographic sketches of historians of medicine.

301

Power Sir D Arcy The foundations of medical history Baltimore: Williams & Wilkins, 1931 182p.

Chapters on biography iconography bibliography

302

Rosen, George. "The place of history in medical education, *Bulletin of the History of Medicine* 22 (October 1948) 594-627

W ll-documented study of the history of the teaching of medical history

303

Sarton, George A. L. The study of the history of science. Cambridge, Mass.: Harvard Univ Pr 1936 75p.

Chapters on historical and scientific methods; chief eference books journals treatises handbooks societies and congresses. With bibliography

304

Sigerist, Henry E. "The history of medical history In *Milestones in medicine* New York, 1938 p. 163-84. (New York Academy of Medicine Lectures to the Laity no. [2] for 1936-37)

Contains on p 165 footnote with references to earlier articles on the subject by the uthor

305

—— "On the teaching of medical history *Bulletin of the History of Medicine* 2 (April, 1934) 123-39

A bird's-eye view of the outstandi g contributions to the history of medicine, ar ranged by period.

Bibliographies

306

Pazzini, Adalberto. Bibliografia di storia della medicina d'Italia. Roma: Tosi, 1946. 453p.

Covers the whole field of pre-clinical and clinical medicine, medical biography and history, and medical institutions, arranged by subject. The lack of an index makes it difficult to use. This is not bibliography of the original contributions, but is limited to material dealing with the history of medicine.

Comprehensive histories

307

Baas, Johann H. Outlines of the history of medicine. Tr and in conjunction with the author rev and enl. by H. E. Handerson. New York Vail, 1889 1 173p.

Originally published in German in 1876 and now superseded for the most part by Garrison. Contains some material not in cluded elsewhere. Garrison called it "still in many respects the most readable.

308

Castiglioni, Arturo. A history of medicine. T from the Italian and ed by E. B Krumbhaar. 2. ed., rev and enl. New York Knopf, 1947 1,192+ lxip.

Well illustrated, comprehensive, the most readable and up to date of the long histories and should serve as detailed introduction to the subject. It does not entirely supersede *Garrison as reference work. Useful bibliog raphy* arranged by subject.

309

Clendening, Logan. Source book of medical history New York and London Hoeber [1942] 685p.

Translated excerpts from outstanding contributions, from the Egyptian papyri to Roentgen, with brief historical and biographic notes, references to the original publications and to recent histories and commentaries. Necessary for any medical historical collection.

310

Diepgen, Paul. Geschichte der Medizin; die historische Entwicklung der Heilkunde und des ärztlichen Lebens. Berlin de Gruyter 1949+ 3v

Only v 1 and the first part of 2 published. Through the middle of the eighteenth century. Good general survey despite over emphasis on German contributions. For reading rather than for reference.

311

Garrison, Fielding H. An introduction to the history of medicine. 4. ed. Philadelphia Saunders, 1929 996p.

The most valuable historical work for any medical library Comprehensive, thorough, and usually accurate. Appendixes contain chronology of medicine; lists of individual biographies, general medical histories, and histories of special subjects in medicine. A new and revised edition is in preparation.

312

Gotfredsen, Edvard. Medicinens historie. København, 1950. 513p.

Good source for names and dates of European medical men not in Garrison and other histories. Useful bibliography arranged by subject.

313

Guthrie, Douglas. A history of medicine. London Nelson, [1945] 448p.

An outline of the progress of medicine from Imhotep to Osler With illustrations and brief, annotated bibliog raphy

314

Haeser Heinrich. Lehrbuch der Geschichte der Medicin nd der epidemischen Krank heiten. 3. Aufl. Jena Dufft, 1875–82. 3v

"Remarkable for erudition but not always for accuracy The third volume is in aluable" (Garrison) Unfortunately there is no subject index, but detailed table of contents. V 1 and 2 contain chronologic history through the early years of the nine teenth century 3 contains history of epidemics.

315

Mettler Cecilia C. History of medicine, a correlative text, arranged according to subjects. Ed. by Fred A. Mettler Philadelphia *Blakiston, 1947 1,215p.*

Arranged by broad subject sections. With excerpts from original writings, footnotes and bibliographies.

316

Meyer-Steineg, Theodor and Sudhoff Karl. Geschichte der Medizin im Überblick mit Abbildungen. 3. Aufl. Jena: Fischer 1928. 446p.

Excellent history well illustrated, short but comprehensive.

317

Puschmann, Theodor. Neuburger, Max, and Pagel, Julius, eds. Handbuch der Geschichte der Medizin. Jena. Fischer 1902–05. 3v

"Most reliable source of the larger reference works after Haeser ... as a reference work cannot be overestimated" (Garrison) Monographs by various authors, with bibliographies. V 1 general history of medicine through the Middle Ages ... 2 and 3, histories of special subjects in medicine.

318

Sigerist, Henry E. A history of medicine. New York. Oxford Univ Pr 1951+ 8v (Yale University School of Medicine. Library Historical Library Publication no. 27)

Only ... 1 (564p.) so far issued of an eight-volume work which will certainly be the definitive history of medicine. V 1 covers primitive and archaic medicine. A long introduction on the historical ... pproach to medicine is particularly important. With illustrations.

319

Tridente, Mauro. Manuale di storia della medicina. Castello. Società Tipografica Editrice "Leonardo da Vinci, [1948] 491p.

Chronologic story with a final chapter on histories of medicine. Without references of any kind. No subject index.

Shorter histories

320

Clark, Paul F and Clark, Alice S. Memorable days in medicine: calendar of biology and medicine. Madison Univ of Wisconsin Pr 1942. 305p.

Published serially in briefer form in *Medical Life* 1936–37 Entries for each day of the year cite briefly dates of births and deaths of men who have made contributions to medicine from early days through the present time. Other dates celebrate outstanding events. With bibliography

321

Cumston, Charles G An introduction to the history of medicine. New York. Knopf, 1926. 390p.

"Written for the general reader and as an introduction for the student of medicine to the history of his chosen profession." Through the eighteenth century only

322

Dana, Charles L. The peaks of medical history 2. ed. New York: Hoeber 1928. 105p.

Brief chapters emphasizing the "high spots in the evolution of medicine.

323

Mayrhofer Bernhard. Kurzes Wörterbuch zur Geschichte der Medizin. Jena Fischer 1937 224p.

An index of medical men and discoveries containing very brief biographic sketches and useful notes giving dates of first descriptions of diseases, operations, etc. A useful volume for quick reference.

324

Osler Sir William. The evolution of modern medicine. New Haven. Yale Univ Pr 1923. 243p.

An aeroplane flight over the progress of medicine through the ages. Intended for lay audience but more appropriate for the medical student or physician.

325

Singer Charles J A short history of medicine. New York. Oxford Univ Pr 1928. 368p.

Excellent introduction to the history of medicine, the best of its kind.

326

Withington, Edward T Medical history from the earliest times. London. Scientific Pr 1894 424p.

"There are few of the smaller sized books which convey so much accurate information (Garrison) Through the eighteenth century only Inadequate index.

327

Woglom, William H. Discoverers for medicine. New Haven Yale Univ Pr 1949 229p.

Chapters on: blood pressure; respiration; foxglove; vaccination laryngeal mirror; Eustachian tube; eyeglasses the itch, quinine; phagocytosis; X-rays; heredity and milk sickness—as seen through biographic sketches of the discoverers. With bibliography and illustrations.

For the layman

328

Clendening, Logan. Behind the doctor New York: Knopf, 1933. 458p.

Another edition, same year has title: *The romance of medicine*

329

Fox, Ruth. Milestones of medicine. New York. Random House, [1950] 237p.

Röntgen and the X-ray; Madame Curie and radium; the drug industry grows; vitamins the scientists outlaw diphtheria; war on yellow fever; the discovery of insulin; penicillin.

330
Haggard, Howard W Devils, drugs, and doctors. New York: Harper, 1929 405p.

331
——The doctor in history New Haven: Yale Univ Pr 1934. 399p.

332
——The lame, the halt and the blind. New York: Harper 1932. 420p.

333
Hayward John A. The romance of medicine. [2. ed.] London. Routledge, [1945] 286p.

334
Marriott, Henry J L. *Medical milestones.* Baltimore: Williams & Wilkins, 1952. 293p.
Popular sketches on: penicillin, streptomycin, chloromycetin aureomycin bacitracin and polymyxin, new treatments for anemia, developments in heart surgery anti-coagulants; antithyroid drugs; hormones and cancer; Rh story British anti-Lewisite; leprosy; cortisone and ACTH; malaria; insects and DDT; dramamine.

335
Podolsky Edward. Doctors, drugs and steel. New York: Beechhurst Pr [1946] 384p.
Dramatized story of twentieth-century contributions, with illustrations of modern Russian medicine.

336
Rapport, Samuel, and Wright, Helen, eds. Great adventures in medicine. New York. Dial Pr 1952. 874p.
Excerpts from original material, histories, translations, and fiction. Designed for the layman.

337
Robinson, Victor. The story of medicine. New York: New Home Library [1943] 564p.

338
Stubbs, S. G Blaxland, and Bligh, E. W Sixty centuries of health. London. Sampson Low Marston, [1931] 253p.

Ancient medicine

339
Allbutt, Sir Thomas C. Greek medicine in Rome. London: Macmillan, 1921. 633p.
A collection of essays recommended for any historical medical collection. A few of the pieces are on other medical subjects than the title indicates.

340
Bhagavat Sinhaji. A short history of Aryan medical science. London. Macmillan, 1896. 280p.
A study of Hindu medicine, rather than of the physicians who made contributions to it.

341
Brock, Arthur J Greek medicine; being extracts illustrative of medical writers from Hippocrates to Galen. Tr and annotated. London Dent, [1929] 256p. (Library of Greek thought.)
"Dr Brock has chosen his extracts admirably and they illustrate well some six centuries of Greek thought.

342
Chakraberty Chandra. An interpretation of ancient Hindu medicine. Calcutta: Ramchandra Chakraberty 1923. 599p.

343
Contenau, Georges. La médecine en Assyrie et en Babylonie. Paris: Maloine, [1938] 227p.
Illustrated study with lengthy bibliography

344
Dawson, Warren R. The beginnings; Egypt & Assyria New York. Hoeber 1930. 86p. (Clio medica, no. 1)

345
Edelstein, Emma J., and Edelstein, Ludwig Asclepius; collection and interpretation of the testimonies. Baltimore: Johns Hopkins Pr 1945. 2v
V 1 contains collection of the ancient references to Asclepius' lif and deeds, his cult, his temples, and his images. Text in Greek and English. V 2 analyzes the material. Scholarly work, valuable in any collection on ancient medicine.

346
Elgood, Cyril L. The medical history of Persia and the Eastern caliphate from the earliest times until the year A.D. 1932. Cambridge: Univ Pr 1951 616p.
Readable and comprehensive. Excellent survey which supersedes earlier work, *Medicine in Persia* (New York: Hoeber 1934) (Clio medica, no. 14)

347
Elliott, Sir James S. Outlines of Greek and Roman medicine. New York: Wood, 1914. 165p.
A brief survey

348
Leake, Chauncey D The old Egyptian medical papyri. Lawrence: Univ of Kansas Pr

1952. 108p (Logan Clendening lectures on the history and philosophy of medicine.)

Chiefly about the Hearst medical papyrus, with a list of prescriptions in it and chapters on Egyptian weights and measures, drug measurements, and therapeutics.

349

Lund, Fred B. Greek medicine. New York Hoeber 1936. 161p (Clio medica, no. 18)

350

Mukhopadhyaya Girindranath. History of Indian medicine. [Calcutta] Univ of Calcutta, 1923–26 2v

A detailed study of the works of Ayurvedic physicians with translated excerpts.

351

Muthu, David J. A. C. A short account of the antiquity of Hindu medicine. 3 ed. New York. Hoeber 1931 111p

Brief history

352

Wise, Thomas A. Commentary on the Hindu system of medicine. New issue. London Trübner 1860 431p

A detailed account of the practice of medicine among the Hindus

353

Zimmer Heinrich R. Hindu medicine, ed. by Ludwig Edelstein. Baltimore Johns Hopkins Pr 1948 203p. (Publications of the Institute of the History of Medicine, Johns Hopkins University 3. ser The Hideyo Noguchi lectures, no. 6.)

Brief account of Hindu medicine, not of those who made contributions to it. Chapters on medical tradition and the Hindu physician and the human body—its forces and resources.

SEE ALSO Celli (no. 1149) Neuburger (no. 359)

Medieval medicine

354

Browne, Edward G Arabian medicine Cambridge: Univ Pr 1921 138p

Brief but competent survey

355

Campbell, Donald. Arabian medicine and its influence on the Middle Ages London K. Paul, Trench, Trubner 1926. 2v

Recommended for the small medical library in spite of occasional inaccuracies V 1 history; 2 Latin translators of the Arabic works Latin versions of Galen bibliography

356

Khairallah, Amin A. Outline of Arabic contributions to medicine. [Beirut: American Pr] 1946. 228p

Very useful sketch with appendixes containing lists of Arabic physicians, Greek physicians, Arabic books, Arabic books translated into Latin Latinized proper Arabic nouns. With bibliography

357

Leclerc, Lucien. Histoire de la médecine arabe. Paris Leroux, 1876. 2

Exhaustive history not superseded by any later work.

358

MacKinney Loren C. Early medieval medicine, with special reference to France and Chartres. Baltimore: Johns Hopkins Pr 1937 247p. (Publications of the Institute of the History of Medicine, Johns Hopkins University, 3. ser 3.)

Readable and documented introduction to medieval medicine.

359

Neuburger Max. History of medicine. T by Ernest Playfair London Frowde, 1910–25 2

"The best modern work (Garrison) Readable and comprehensive history through the Middle Ages. Particularly useful is the historical survey of the literature. Of 2 only part I was published No index.

360

Riesman, David. The story of medicine in the Middle Ages. New York Hoeber 1935 402p

An introduction to the subject intended for medical students and laymen.

361

Walsh, James J Medieval medicine. London Black, 1920. 221p.

Short, popular history

SEE ALSO Clay (no. 1094) Haskins (no 46); Møller-Christensen (no. 385) Hecker (no. 1609) Reicke (no. 1097); Sudhoff (no. 1824)

Modern medicine

362

British Medical Association. Fifty years of medicine: a symposium from the "British Medical Journal. London The Association, 1950. 330p.

Nineteen chapters on different aspects of medicine.

363

Buck, Albert H. The dawn of modern medicine. *New Haven Yale Univ Pr 1920* 288p.

Useful and detailed history of medicine in Europe, c. 1750–1850.

364

Galdston, Iago A. Progress in medicine; a critical review of the last hundred years. *New York Knopf, 1940. 347p.*

General survey of outstanding contributions.

365

Haagensen, Cushman D., and Lloyd, Wyndham E. B. A hundred years of medicine. New York Sheridan House, [1943] 443p.

Excellent study with sections on medicine during the last hundred years; surgery during the last hundred years; new social aspects of medicine. Not a reprinting of Lloyd's *A hundred years of medicine* London, [1936]; for the most part rewritten with much new material. With bibliography

366

Shryock, Richard H. The development of modern medicine, an interpretation of the social and scientific factors involved. New York: Knopf, 1947 457p

An excellent history emphasizing public health. A brief chapter on the seventeenth century precedes the history from 1700 to the present.

National

American Indians

367

Corlett, William T. The medicine-man of the American Indian and his cultural background. Springfield, Ill. Thomas, [1935] 369p.

This medical picture of most of the important aboriginal tribes of the Americas includes chiefly information about the Indians of today. With bibliography

368

Pardal, Ramon. Medicina aborigen Americana. Buenos Aires. Anesi, [1937] 377p. (Humanior; biblioteca del Americanista moderno.)

Chapters on primitive medicine; magic medicine; medicine of the Tupi Guarani, of the Araucanos, of Peru, of Mexico drugs With bibliography

369

Stone, Eric P. Medicine among the American Indians. New York. Hoeber 1932. 139p. (Clio medica, no. 7)

With bibliography

Arabia

SEE Medicine—Histories—Medieval; Sarton (no. 50)

Argentina

370

Furlong Cardiff, Guillermo. Médicos argentinos durante la dominación hispánica. Buenos Aires Editorial Huarpes, 1947 311p. (Cultura argentina, no. 6.)

General survey not chronologic; chapters devoted to different subjects. With lists of medical books and periodical articles published in Buenos Aires through *1810.*

SEE ALSO Latin America in this section.

Assyria

SEE Medicine—Histories—Ancient.

Austria

371

Schönbauer Leopold. Das medizinische Wien; Geschichte, Werden, Würdigung. 2. Aufl. Wien: Urban & Schwarzenberg, 1947 484p.

Useful, detailed, illustrated, with bibliography. Although limited to Vienna, included *because of dearth of material on history of* medicine in Austria.

SEE ALSO Neuburger (no. 400)

Babylonia

SEE Medicine—Histories—Ancient.

Belgium

372

Broeckx, Corneille. Essai sur l'histoire de la médecine belge, avant le XIX[e] siècle. Bruxelles Encyclographique des Sciences Médicales, 1839. 322p.

Useful particularly for Chapter 5 "Bibliographie médicale belge.

373

Faidherbe, Alexandre J. *Les médecins et les chirurgiens de Flandre avant 1789.* Lille: *Danel, 1892. 347p.*

Well documented, with biographies and bibliography

Brazil

374

Santos, Lycurgo de Castro, filho. História da

medicina no Brasil (do século XVI ao século XIX) São Paulo· Editora Brasiliense, 1947 2v

Arranged by subject. With valuable list of hospitals, medical societies, journals, and short biographies of physicians. Bibliography but no index.

SEE ALSO Latin America in this section, and Souza-Araujo (no. 1138)

Canada

373
Burroughs Wellcome & Co. Historic notes and Canadian medical lore. London: Burroughs Wellcome [1906] 80p.
Brief sketch.

374
Canniff, William. The medical profession in upper Canada, 1783–1850. Toronto Briggs, 1894 688p.
Useful primarily for the biographic sketches, to which p.217–677 are devoted

377
Heagerty John J Four centuries of medical history in Canada and sketch of the medical history of Newfoundland. Toronto· Macmillan, 1928. 2
Comprehensive and detailed study

378
Howell, William B. Medicine in Canada. New York Hoeber 1933. 137p. (Clio medica, no. 9)
With bibliography

379
Seaborn, Edwin. The march of medicine in western Ontario Toronto: Ryerson P [1944] 386p.
Brief sketches of Indian and French medicine. Chiefly about English medicine, with emphasis on cholera epidemics and hospitals

SEE ALSO Malloch (no 443)

Chile

380
Vicuña MacKenna, Benjamin Los médicos de antaño en el reino de Chile. Santiago Editorial Difusión, [1947] 301p.
Chapters on indigenous medicine, the hospital of Socorro, the work of the hospitallers, eighteenth-century charitable institutions and plagues, the new era. N index.

China

381
Morse, William R. Chinese medicine. New York Hoeber 1934. 185p. (Clio medica, no. 11)
With bibliography

382
Wong, K. Chimin, and Wu, Lien-Teh. History of Chinese medicine. 2. ed. Shanghai. National Quarantine Service, 1936. 906p
Comprehensive and detailed study

Cuba

383
Martínez Fortún y Foyo, José A. Cronología médica cubana contribución al estudio de la historia de la medicina en Cuba. La Habana, 1947+ fasc. 1 1492–1800. 77p
Chronology with occasional long notes. N Index in fasc. 1.

Denmark

384
Ingerslev Johan V C. Danmarks læger og lægevæsen fra de ældste tider indtil aar 1800. Kjøbenhavn Jespersen, 1873. 2
Especially valuable for its biographic sketches.

385
Møller Christensen, Vilhelm. Middelalderens Lægekunst i Danmark. Copenhagen Munksgaard, 1944 247p. (Acta historica scientiarum naturalium et medicinalium. 3)
Medicine in Denmark in the Middle Ages. Summary in English.

386
Norrie, Gordon. Kirurger og doctores et kritisk indrag til lægenddannelsens historie Danmark før 1800. København: Levin & Munksgaard, 1929 194p.
Brief but useful sketch.

387
Secher Knud. Livsforsikringsmedicinens historie i Danmark gennem 100 aar København Høst, 1942. 234p.
Story of public health, with statistics and bibliography

Egypt

SEE Medicine—Histories—Ancient.

Finland

SEE Hjelt (no. 438)

France

388
Delaunay Paul. La vie médicale aux XVI° XVII° et XVIII° siècles [en France] Paris

Editions Hippocrate, 1935 556p. (Collection Hippocrate, no. 4.)

"Les étudiants en médecine," "La vie privée du médecin," "La vie professionnelle," "La vie corporative," "La vie religieuse," "La vie politique," "La vie sociale," "La vie intellectuelle," "La vie doctrinale."

389

Garrison, Fielding H. "The medical literature of France," *Bulletin of the New York Academy of Medicine* 2. ser. 9 (May 1933) 267-93.

A brief but comprehensive discussion

390

Guiart, Jules. Histoire de la médecine française, son passé, son présent, son avenir Paris. Editions Nagel, [1947] 284p.

Brief chronologic survey from prehistoric times to the parasitology and tropical medicine of the early twentieth century

391

Laignel-Lavastine, Maxime, and Molinéry Raymond. French medicine. Tr. by E. B Krumbhaar New York Hoeber 1934. 187p (Clio medica, no. 15.)

392

Lévy-Valensi, Joseph. La médecine et les médecins français au XVII^e siècle. Paris Baillière, 1933. 668p.

"Les sciences médicales," "L'enseignement," "L'assistance publique aux malades," "Les practiciens," and "Biographies" No index, but detailed table of contents.

393

Wickersheimer Charles A. E. La médecine et les médecins en France, à l'époque de la Renaissance. Paris: Maloine, 1906. 693p (Bibliothèque de curiosités et singularités médicales.) (Thesis.)

A useful work covering medical practice, hygiene, pharmacy therapeutics, education and hospitals. No index.

SEE ALSO Faidherbe (no. 373); Fourmestraux (no. 1815); Quesnay (no. 1823)

France, Colonial

394

Brau, Paul. Trois siècles de médecine coloniale française. Paris Vigot, 1931. 205p

Useful work. No index, but detailed table of contents.

Germany

395

Haberling, Wilhelm. German medicine. Tr. by Jules Freund. New York: Hoeber 1934. 160p. (Clio medica, no. 13.)

396

Hirsch, August. Geschichte der medicinischen Wissenschaften in Deutschland. München Oldenbourg, 1893. 739p.

Detailed studies of the eighteenth and nineteenth centuries with brief sketches of earlier years.

SEE ALSO Frohn (no. 1135)

Great Britain

397

Burroughs Wellcome & Co. Anglo-Saxon leechcraft. London Burroughs Wellcome, [1912] 100p.

Brief historical sketch of early English medicine.

398

Chaplin, Thomas H. A. Medicine in England during the reign of George III. London. The Author 1919 141p.

An excellent history with helpful information, such as list of medical periodicals published in England in that period.

399

Comrie, John D. History of Scottish medicine. 2. ed. London Wellcome Historical Medical Museum, 1932. 2v

Comprehensive and detailed history

400

Neuburger Max. British medicine and the Vienna school, contacts and parallels. London Heinemann, 1943. 134p.

Interesting study of eighteenth- and nineteenth-century parallels, with bibliography

401

Power Sir D'Arcy. Medicine in the British Isles. New York. Hoeber 1930. 84p. (Clio medica, no. 2.)

With bibliography

SEE ALSO British Medical Association (no. 362); Creighton (no. 1606) Frazer (no. 1597); James (no. 1296); MacNalty (no. 1734); Malloch (no. 443); Parker (no. 1820); Wall (no. 1826); Young (no. 1827)

Greece

SEE Medicine—Histories—Ancient; and Sarton (no. 50)

Guatemala

402

Asturias, Francisco. Historia de la medicina en Guatemala. Guatemala: Tip. Nacional, 1902. 557p. (Thesis.)

Useful work, without author index.

403
Martínez Durán, Carlos. Las ciencias médicas en Guatemala. Guatemala: Sánchez & de Guise, [1941] 439p.
Chronologic history particularly useful for early centuries. No index, but detailed table of contents. Does not entirely supersede Asturias (no. 402)

Haiti

404
Parsons, Robert P. History of Haitian medicine. New York: Hoeber 1930. 196p.
Revised and elaborated text of article appearing in *Annals of Medical History* new ser. 1 (May 1929) 291–324. With bibliography

Hindu countries

SEE Medicine—Histories—Ancient.

Hungary

405
Magyary-Kossa, Julius von. Ungarische medizinische Erinnerungen. Budapest: Danubia Verlag, 1935. 368p.
Brief but useful work, with bibliography

India

SEE Medicine—Histories—Ancient.

Ireland

406
Burroughs Wellcome & Co. Medicine in antient [sic] Erin. A historical sketch from Celtic to mediaeval times. London: Burroughs Wellcome, [1909] 64p.
Brief sketch.

407
Fleetwood, John. History of medicine in Ireland. Dublin: Browne & Nolan, [1951] 420p.
Chronologic story with chapters on medical societies and schools, hospitals, and professional publications. With chronology and bibliography

Italy

408
Castiglioni, Arturo. Italian medicine. Tr. by E. B. Krumbhaar. New York: Hoeber 1932. 134p. (Clio medica, no. 6.)

409
De Renzi, Salvatore. Storia della medicina in Italia. Napoli: Filiatre-Sebezio, 1845–49. 5v. Suppl. [1849] 136p.
Exhaustive history

410
Ferrannini, Andrea. Medicina italica. 2. ed. Milano: Ufficio Stampa Medica Italiana [1935] 295p.
General survey with bibliography. Far fetched claims of priority for Italians and author's political views make text unreliable.

411
Pitrè, Giuseppe. Medici, chirurgi barbieri e speziali antichi in Sicilia, secoli XIII–XVIII. Roma: Casa Editrice del Libro Italiano, 1942. 405p.
Chapters on medical education, doctrines, hygiene, surgery, pharmacy, the Accademia di Medicina. With short glossary

Japan

412
Fujikawa, Yu. Japanese medicine. Tr. by John Ruhräh. New York: Hoeber 1934. 114p. (Clio medica, no. 12.)

Latin America

413
Moll, Aristides A. Aesculapius in Latin America. Philadelphia: Saunders, 1944. 639p.
Useful, general survey unfortunately unreliable because of many errors. Appendix contains chronology for disease, and medical and general chronology for Latin America. With bibliography arranged by country

SEE ALSO, in this section, Argentina, Brazil, Mexico, Peru, Uruguay, and Muñoz (no. 1610)

Latvia

SEE Brennsohn (no. 268)

Mexico

414
Chavez, Ignacio. México en la cultura médica. México: Colegio Nacional, 1947. 187p.
Brief survey with bibliography and chronology

415
Flores, Francisco A. Historia de la medicina en México. México: Of. Tip. de la Secretaría de Fomento, 1886–88. 3v.
Exhaustive and expensive work. No index, but detailed table of contents.

416
Izquierdo, José J. Balance cuatricentenario de la fisiología en México. México: [Casa Editorial Cultura] 1934. 358p.
Useful chiefly for the teaching of physiol-

ogy in Mexico with lists of professors and bibliographic notes.

417

Ocaranza, Fernando. Historia de la medicina en México. México. [Laboratorios Midy] 1934. 209p.

Sketchy survey

418

Rodríquez, Luis A. La ciencia médica de los Aztecas. México: Editorial Hispano Méxicо, [1944] 170p.

Chiefly about the medicinal plants used. Appendixes, p.117–[71] contain La medicina de los Aztecas, and La medicina en el Perú de antaño by Hans Dietschy. With illustrations.

419

Van Patten, Nathan. "The medical literature of Mexico and Central America." *Bibliographical Society of America Paper* 24 (1930), 150–99

Brief but useful.

SEE ALSO, in this section, American Indians; Latin America.

Netherlands

420

Baumann, Evert D. Uit drie eeuwen Nederlandse geneeskunde. Amsterdam: Meulenhoff, [1951] 320p.

From the fourteenth to the nineteenth century with illustrations and brief bibliography

Netherlands East Indies

421

Schoute, Dirk. De geneeskunde in Nederlandsch Indië gedurende de negentiende eeuw. Batavia: Kolff [1936] 381p.

Useful, chronologic study

Persia

SEE Medicine—Histories—Ancient.

Peru

422

d'Harcourt, Raoul. La médecine dans l'ancien Pérou. Paris: Maloine, 1939. 242p. (La médecine à travers le temps et l'espace, no. 3.)

Short study derived chiefly from archeologic and anthropologic sources, with bibliography

423

Lastres Quiñones, Juan B. Historia de la medicina peruana. Lima: Santa María, 1951 3v. (Universidad Nacional Mayor de San Marcos. Publicaciones del cuarto centenario. Historia de la Universidad, no. 5.)

V.1 Medicine of the Incas; 2. under the viceroys; v.3 of the Republic. Useful, detailed history with bibliography

424

Valdizan, Hermilio. Historia de la medicina peruana. Lima: Hora del Hombre, 1944. 144p.

Brief history. No index.

SEE ALSO Medicine—Histories—Ancient; and, in this section, American Indians; Latin America, and Rodríquez (no. 418)

Portugal

425

Ferreira de Mira, Matias B. História da medicina portuguesa. Lisboa: Empresa Nacional de Publicidade, 1947. 558p.

General history through early nineteenth century. More detailed than de Pina Guimarães. With illustrations and bibliography

426

Pina Guimarães, Luis J. de. Histoire de la médecine portugaise; abrégé. Pôrto: Enciclopédia Portuguesa, 1934. 132p.

Prepared for the third Congrès International d'Histoire des Sciences, 1934. A brief history of the men who have made contributions to Portuguese medicine.

427

——— Vimaranes; materiais para a história da medicina portuguesa—Arqueologia—Antropologia—História. Pôrto: Araújo & Sobrinho, 1929. 336p. (Thesis.)

Useful as a study of medical practice rather than of the men who made contributions to it. Lengthy bibliography

428

Pires de Lima, Joachim A. Epitome de história da medicina portuguesa. Porto: Portucalense Editora, 1943. 129p.

Very brief sketch.

SEE ALSO Silva Carvalho (no. 1137); Sá, Correia (no. 1098)

Roman Empire

SEE Medicine—Histories—Ancient.

Russia

429

Gantt, William A. H. Russian medicine. New York: Hoeber 1937. 214p. (Clio medica, no. 20.)

With bibliography

430
Garrison, Fielding H. "Russian medicine under the old regime." *Bulletin of the New York Academy of Medicine* 2. ser. 7 (September 1931) 693–734
Useful survey

431
Ravitch, Michael L. The romance of Russian medicine. New York: Liveright, [1937] 357p.
Devoted partly to Soviet medicine.

432
Richter, Wilhelm M. Geschichte der Medicin in Russland. Moskwa: Wsewolojsky 1813–17 3v
Comprehensive and detailed, the only such work on the subject.

Scotland

SEE Great Britain in this section.

Sicily

SEE Italy in this section.

Spain

433
Chinchilla, Anastasio. Anales históricos de la medicina en general, y biográfico-bibliográficos de la española en particular. Valencia: Lopez, 1841–46. 7v
The four volumes devoted to the history of Spanish medicine form an exhaustive work, with biographies of medical men and synopses or quotations from their writings. No index. Table of contents listing authors is chronologic, not alphabetic.

434
García del Real, Eduardo. Historia de la medicina en España. Madrid: Editorial Reus, 1921 1148p. (Biblioteca médica de autores españoles y extranjeros, 23.)
Comprehensive, although less detailed than earlier Spanish histories of medicine; no index.

435
Garrison, Fielding H. An epitome of the history of Spanish medicine. *Bulletin of the New York Academy of Medicine* 2. ser. 7 (August, 1931) 589–634
Excellent sketch with chronology of secular and medical history in Spain.

436
Hernández Morejón, Antonio. Historia bibliográfica de la medicina española. Madrid [n.p.] 1842–52. 7
Exhaustive history for the most part not as detailed as Chinchilla. No index, but has chronologic table of contents.

437
Wellcome Foundation. Spanish influence on the progress of medical science. London: The Foundation, [1935] 60p.
Brief sketch with list of biographic sources.

SEE ALSO Urandizaga (no. 1265)

Sweden

438
Hjelt, Otto E. A. Svenska och Finska medicinalverkens historia, 1663–1812. Helsingfors: Helsingfors Central-Tryckeri, 1891–93. 3v
V 1: medical education and societies, v 2: public health; v 3: hospitals, military medicine; legal medicine; pharmacy etc. With final section containing short biographic notes.

Switzerland

439
Olivier, Eugène. Médecine et santé dans le pays de Vaud au XVIII[e] siècle, 1675–1798. Lausanne: Éditions La Concorde, 1939. 2v
Detailed and comprehensive, with a list of 1,262 physicians.

United States

440
Century (A) of American medicine. 1776–1876. Philadelphia: Lea, 1876. 366p.
Useful articles, first published in the *American Journal of the Medical Sciences* 1876. Contents: E. H. Clarke, "Practical medicine"; H. J. Bigelow, "Discovery of modern anaesthesia"; S. D. Gross, "Surgery"; T. G. Thomas, "Obstetrics and gynaecology"; J. S. Billings, "Literature and institutions." No index.

441
Gordon, Maurice B. Aesculapius comes to the colonies; the story of the early days of medicine in the thirteen original colonies. Ventnor, N. J.: Ventnor Publishers, [1949] 560p.
Illustrated story. With short bibliography. For the casual reader rather than the historian.

442
Gross, Samuel D. History of American medical literature from 1776 to the present time. Philadelphia: Collins, 1875. 85p.
A useful survey arranged under different subjects in medicine as well as under medi-

cal biography translations and reprints, medical journals, medical theses, medical book publishers, etc.

443

Malloch, Archibald. Medical interchange between the British Isles and America before 1801. Based on the Fitzpatrick lectures of the Royal College of Physicians of London for 1939. [London: The College, 1946.] 143p.

Arranged by state.

444

Mumford, James G. A narrative of medicine in America. Philadelphia: Lippincott, 1903. 508p.

Readable history for the most part superseded by Packard.

445

Packard, Francis R. History of medicine in the United States. [2. ed.] New York: Hoeber 1931. 2v

Comprehensive history necessary for any medical historical collection, despite occasional inaccuracies. Good bibliography

446

Pickard, Madge E., and Buley R. Carlyle. The midwest pioneer his ills, cures, and doctors. Crawfordsville, Ind. Banta, 1945 339p.

Readable story with bibliography chiefly about first half of nineteenth century Chapters on home remedies; doctors bleed, blister and purge the people's doctors; patent medicines.

447

Postell, William D. The health of slaves on southern plantations. Baton Rouge: Louisiana State Univ Pr [1951] 231p.

An interesting account taken chiefly from contemporary manuscript records, with lengthy bibliography

448

Shafer Henry B. The American medical profession 1783 to 1850. New York. Columbia Univ Pr 1936. 271p. (Studies in History Economics and Public Law no 417 edited by the Faculty of Political Science of Columbia University)

Useful study of medical practice of the period, with chapters on medical fees, medical education, and medical societies. With bibliography

449

Sigerist, Henry E. American medicine. T by Hildegard Nagel. New York Norton, [1934] 316p.

Useful survey with helpful bibliography

450

Smallwood, William M., and Smallwood, Mabel S. C. Natural history and the American mind. New York. Columbia Univ Pr 1941 445p.

Contains much about American medical men as well as naturalists who made contributions of interest to medicine. Includes chapters on early writings, natural history in the colleges, Americans at European universities, the part played by the microscope, etc. Through 1850, with bibliography

SEE ALSO Ackerknecht (no. 1148); Ashburn (no. 1354) Duffy (no. 1607) Hubbell (no 1295) Ravenel (no. 1602); Top (no. 1614)

CALIFORNIA

451

Harris, Henry California medical story San Francisco Stacey 1932. 421p.

Authoritative and detailed history to 1900, with useful bibliography

452

Kress, George H. A history of the medical profession of Southern California. 2. ed. Los Angeles Press of the Times-Mirror Printing and Binding House, 1910. 209p.

General history; with biographies, chiefly of contemporary men.

453

Read, Jay M. A history of the California Academy of Medicine, 1870 to 1930. San Francisco: [The Academy] 1930. 186p.

Short history with biographies.

COLORADO

454

Colorado State Medical Society Medical Coloradoana jubilee volume in celebration of the semi-centennial anniversary 1871–1921 Denver Colo. The Society 1922. 144p.

Historical notes occupy but few pages. Medical periodicals of Colorado. List of books and papers by the medical profession of Colorado.

CONNECTICUT

455

Russell, Gordon W "Early medicine and early medical men in Connecticut, *Connecticut Medical Society Proceedings* 100 (1892) [69]-1 6, 177 224

Short history to 1800, with brief biographies.

456

Thoms, Herbert K., ed. The heritage of Con-

necticut medicine. New Haven [n.p.] 1942. 223p.

Brief sketches by various authors on different phases of the history of medicine in Connecticut. Many reprinted from the *Connecticut State Medical Journal.* Some bibliographies. No index.

DISTRICT OF COLUMBIA

457
Busey, Samuel C. Personal reminiscences and recollections of forty-six years membership in the Medical Society of the District of Columbia. Washington: [n.p.] 1895. 373p.
Brief biographies and historical material concerning hospitals.

458
Medical Society of the District of Columbia. History of the ... 1817–1909. Washington: The Society, 1909. 501p. Pt. 2, 1833–1944. 1947. 357p.
Brief history with useful biographies and list of members, 1833–1911.

FLORIDA

459
Merritt, Webster. A century of medicine in Jacksonville and Duval County. Gainesville: Univ. of Florida Pr., 1949. 201p.
Chapters on epidemics, especially yellow fever and smallpox; sanitation and founding of State Board of Health; physicians of 1850 and 1870's; hospitals; Florida University Medical School. Illustrated. With bibliography.

ILLINOIS

460
Chicago Medical Society. History of medicine and surgery and physicians and surgeons of Chicago. Chicago: Biographical Pub. Corp., 1922. 928p.
Chiefly devoted to biographies with portraits of medical men, past and present, with chapters on medical colleges, hospitals, societies, and health departments.

461
Illinois State Medical Society. History of medical practice in Illinois. Comp. by L. H. Zeuch. Chicago: Book Pr., 1927. 713p.
V. 1 covering period to 1850, all that was published of this excellent, well-documented and detailed history with bibliography.

INDIANA

462
Indiana State Medical Association. One hundred years of Indiana medicine. [Indianapolis]: The Association, 1949. 195p.
Published in connection with the centennial of the Association. Dorothy Ritter Russo, Editor-in-Chief, under the direction of Charles N. Combs and Edgar F. Kiser. With photographs of the presidents of the Association, list of medical journals, and a bibliography of Indiana medicine.

463
Kemper, General W. H. A medical history of the State of Indiana. Chicago: American Medical Association, 1911. 393p.
Short history with many biographies. Revised and elaborated from articles originally published in the *Journal of the Indiana State Medical Association,* 1909–11.

IOWA

464
Fairchild, David S. History of medicine in Iowa. [Des Moines: Iowa State Medical Society, 1927.] 356+95p.
V. 1 all that was published. Reprinted from material published in the *Journal of the Iowa State Medical Society.* Biographies, historical sketches on medical journals, hospitals for the insane, societies, and the Iowa medical profession in World War I.

465
Iowa State Medical Society. One hundred years of Iowa medicine; commemorating the centenary of the Iowa State Medical Society, 1850–1950. Iowa City: Athens Pr., 1950. 483p.
With biographies of presidents and a list of city, district, and county associations. No index. Illustrated.

KENTUCKY

466
McCormack, Joseph N. "Some of the medical pioneers of Kentucky." *Kentucky Medical Journal* 15 (1917) no. 11. 173p.
Also published in book form by the Kentucky State Medical Association, Bowling Green, Kentucky, 1917.

467
Medical Historical Research Project. Kentucky. Medicine and its development in Kentucky. Louisville: Standard Print. Co., 1940. 373p.
Inadequate as a reference work or as a general survey. Useful from the point of view of public health. Bibliographies.

LOUISIANA

468
Fossier, Albert E. History of the Orleans

Parish Medical Society 1878–1928. [New Orleans(?)] Privately printed, 1930 238p.
With roster of members.

MARYLAND

469

Cordell, Eugene F The medical annals of Maryland, 1799–1899 Baltimore: [n p] 1903. 889p.

Excellent history Particularly useful is the "Biography" section which includes all who have been on the lists of the Medical and Chirurgical Faculty whose names are not all included in the index.

470

Quinan, John R. Medical annals of Baltimore from 1608 to 1880. Baltimore: Friedenwald, 1884. 274p.

For the most part superseded by Cordell (no. 469) which is based on this olume. Some additional biographic material. Helpful chronology of medicine in Baltimore, 1608–1880. List of public services of Baltimore physicians, 1730–1880.

MASSACHUSETTS

471

Harrington, Thomas F The Harvard Medical School 1782 1905 Ed by J G Mumford. New York: Lewis Pub. Co 1905 3v

An exhaustive history with biographies and alumni roll. Not restricted to that institution but useful for the history of medicine in Massachusetts from the earliest days. Name index.

472

Viets, Henry R. A brief history of medicine in Massachusetts. Boston: Houghton, 1930. 194p.

A general survey

MICHIGAN

473

Anderson, Fanny J Doctors nder three flags. Detroit: Wayne Uni Pr [1951] 185p

The history of medicine in Michiga (chiefly Detroit) through 1837 Especially valuable for its bibliographic notes.

474

Michigan State Medical Society Medical history of Michigan. Comp. and ed. by committee, C. B. Burr chairman. Minneapolis: Bruce Pub. Co., 1930. 2

A collection of monographs by different authors, providing detailed history

MINNESOTA

For series of articles on the history of medicine in Minnesota counties, see *Minnesota Medicine* 1943+

SEE ALSO Myers (no. 1893)

MISSISSIPPI

475

Underwood, Felix J and Whitfield, Richard N Public health and medical licensure in the State of Mississippi, 1798–1937 Jackson Tucker Print. Co., 1938. 175p.

Brief history with only nine pages devoted to 1798–1877

MISSOURI

476

Goldstein, Max A. One hundred years of medicine and surgery in Missouri. St. Louis: St. Louis Star 1900. 364p.

Comprehensive work, including many biographies, histories of hospitals, medical schools, medical journals, etc.

477

Goodwin, Edward J A history of medicine in Missouri. St. Louis: Smith, 1905. 284p.

Less comprehensive tha Goldstein, with some additional biographies.

NEBRASKA

478

Tyler Albert F and Auerbach, Ella F History of medicine in Nebraska. Omaha Magic City Print. Co., 1928. 662p.

A biographic history with portraits. Includes chapters on publications, organizations, hospitals, with a directory of living physicians.

NEVADA

479

Walker Moses R. A life's review and notes on the development of medicine in Nevada from 1900 to 1944. Reno: [The Author] [1941] 92p.

An autobiography but includes such subjects for Nevada as legislation affecting medicine; Division of Laboratories hospitals; physicians medical organizations; industrial medicine and surgery

NEW HAMPSHIRE

480

New Hampshire Medical Society Records from its organization in 1791 to the year

1854 Concord, N.H.: Rumford Print. Co., 1911. 439p.

A transcription of the original records.

NEW JERSEY

481

Godfrey, Edmund L. B. History of the medical profession of Camden County, N.J. Philadelphia: Davis, 1896. 303p.

Detailed history chiefly of the nineteenth century.

482

Wickes, Stephen. *History of medicine in New Jersey.* Newark: Dennis, 1879. 449p.

Useful work, chiefly biographic. Minor as well as important medical men included.

NEW YORK

483

Heaton, Claude E. "Medicine in New Amsterdam; medicine in New York during the English colonial period, 1664–1775." *Bulletin of the History of Medicine* 9 (1941) 125–43; 17 (1945) 9–37.

The best account of medicine in early New York.

484

Van Ingen, Philip. The New York Academy of Medicine; its first hundred years. New York: Columbia Univ. Pr., 1949. 573p. (History of medicine series, issued under the auspices of the Library of the New York Academy of Medicine, no. 8.)

Chronologic account with brief biographies of the presidents. Useful for information about leading physicians and medical events in New York City 1847–1946.

485

Walsh, James J. History of medicine in New York. New York: N[illegible]tional Americana Society, 1919. 5v.

General survey; inadequate, particularly for early years. Only important men considered.

NORTH CAROLINA

486

Strong, Charles M. History of Mecklenburg County medicine. Charlotte, N.C.: [The Society] 1929. 143p.

A popular and inadequate sketch with chapters on the health department, the Society, hospitals, journals, negro medicine, influenza and smallpox epidemics, and the North Carolina Medical College. No index.

SEE ALSO Childs (no. 1150.)

NORTH DAKOTA

487

Grassick, James. North Dakota medicine. [Grand Forks, N.D.] North Dakota Medical Association, 1926. 378p.

Biographic and brief historical sketches with roster of North Dakota physicians.

OHIO

488

Academy of Medicine of Cleveland. *Pioneer medicine in the Western Reserve. Comp. by* Howard Dittrick. Cleveland: The Academy, 1932. 110p.

Brief historical sketches reprinted from the *Bulletin* of the organization.

489

McCormick, Alexander S. The history of medicine in Summit County, Ohio. New York: Hobson Pr., 1946. 145p.

A chronologic sketch with two chapters on the hospitals and list of officers of the Summit County Medical Society. No index.

490

"Ohio medical history." *Ohio State Archaeological and Historical Quarterly* 1940+ 49 no. 4+

A series of articles in the October issue of each volume.

491

Ohio State University. College of Medicine. A collection of source material covering a century of medical progress, 1834–1934. Blanchester, Ohio: Brown Pub. Co., 1934. 572p.

Useful histories of medical schools and biographies of physicians of today.

OREGON

492

Larsell, Olof. The doctor in Oregon; a medical history. Portland, Ore.: Binfords & Mort for the Oregon Historical Society [1947] 671p.

Comprehensive, including medicine among the Indians, women physicians, and hospitals; with bibliography and notes.

PENNSYLVANIA

493

Diller, Theodore. Pioneer medicine in western Pennsylvania. New York: Hoeber, 1927. 230p.

Short but useful history.

494
Henry Frederick P ed. Standard history of the medical profession of Philadelphia. Chicago: Goodspeed, 1897 544p.
Good material, but no index.

495
Norris, George W The early history of medicine in Philadelphia. Philadelphia [Collins Print. Co.] 1886. 232p.
Short and readable history without index.

SOUTH CAROLINA

496
Childs, St. Julien R. Health and disease in the early history of South Carolina. Charleston. [n.p.] 1931. 114 leaves.
Thesis, unpublished original typescript in library of George Washington University

SEE ALSO Childs (no. 1150)

TENNESSEE

497
Tennessee State Medical Association. The centennial history 1830–1930. Ed. by P M. Hamer Nashville: The Association, 1930. 580p.
Useful and detailed history with biographies.

TEXAS

498
Nixon, Patrick I. A century of medicine in San Antonio, the story of medicine in Bexar County Texas. San Antonio: The Author 1936. 405p.
Detailed history including the twentieth century

499
—— The medical history of early Texas, 1528–1853. [San Antonio] Mollie Bennett Lupe Memorial Fund, 1946. 507p.
Includes Indian medicine, hospitals, the medical department of the army and navy and the Texas State Medical Association With a list of physicians from 1836 to 1853, and bibliography

500
Red, Mrs. George P The medicine man in Texas. [Houston Standard Printing, 1930] 344p.
Short history no index.

UTAH

For series of articles on the history of medicine in Utah, see *Utah Historical Quarterly* 1942, 10 Covers Pahute Indian medicine; early Utah medical practice; pioneer dentistry; memoirs of Alice Parker Isom; Mormon midwives; journal of Priddy Meeks.

VIRGINIA

501
Blanton, Wyndham B. Medicine in Virginia [17th–19th cent.] Richmond W Byrd Pr [1930] Garrett & Massie, 1931–33. 3v
Excellent and exhaustive history with a wealth of information, bibliographic references, and such helpful lists as those of Virginia surgeons in the Revolutionary and Civil Wars, medical fees, and acts of the Assembly concerning medicine.

WISCONSIN

502
Frank, Louis F The medical history of Milwaukee, 1834–1914. Milwaukee: Germania Pub. Co., [1915] 272p.
With biographies and directory of physicians, 1834–1914.

Uruguay

503
Schiaffino, Rafael. Historia de la medicina en el Uruguay [Montevideo: Imprenta Nacional, 1927–52.] 3v
Exhaustive history through 1828.

SEE ALSO Latin America in this section.

Societies

Lack of space precludes the listing here of the many useful histories of individual organizations. In some instances histories of American medical societies have been entered under the names of their states in the section on histories, under United States, but only when such material is not available in any medical history of that particular state.

504
Power Sir D'Arcy ed. British medical societies. London: Medical Press and Circular 1939 311p.
Reprinted, with additions, from the *Medical Press and Circular* 1936–38.

ENCYCLOPEDIAS GUIDES HANDBOOKS

505
Allen, Edgar V ed. Specialties in medical

practice New York: Nelson, 1940–47 2v

Should be used to supplement *Nelson new loose-leaf medicine* (no. 515) Binder's title: *Nelson loose-leaf specialties in medical practice* Superseded articles may be found at the Library of the New York Academy of Medicine.

SEE ALSO Fowler (no. 1345)

506

Bol'shaia meditsinskaia entsiklopediia. Glavnyi redaktor [ed. by] N A. Semashko. Moskva. "Sovetskaia Entsiklopediia 1928–36. 35v

A scientific guide for physicians, biologists, medical technicians, engineers, and others. Contains about 8,000 articles by 1,500 authors, many of which are long, have bibliographies, and are signed Illustrations, some in color

507

British encyclopaedia of medical practice: 2. ed. under the general editorship of Lord Horder London Butterworth, 1950–53 12v and index. Cumulative suppl 1952+

Annual cumulative supplements keep this up to date. Key symbols refer from articles in the supplements to those on the same subjects in the main work, and these symbols should be added there to indicate additional material in the supplements An annual survey volume, subtitled "Medical Progress," reviews current advances.

507 1

Clark, Randolph L Jr and Cumley Russell W eds. The book of health, medical encyclopedia for everyone Houston Elsevier Pr 1953. 836p

An excellent book to which the medical librarian can refer the lay reader A well-written and profusely illustrated modern work representing what 242 prominent physicians think well-informed persons should know about health and bodily function.

508

Collection médico-chirurgicale à révision annuelle Paris Flammarion, 1948+

Edited by J L. Pasteur Vallery-Radot and Jean Hamburger A comprehensive series of monographs covering the whole field of medicine and surgery Volumes being issued separately and unnumbered. Loose-leaf. Superseded articles may be found at the Armed Forces Medical Library

509

Cyclopedia of medicine, surgery specialties George Morris Piersol, ed -in-chief, [3. ed] Philadelphia Davis, 1950+ 14v and index. Revision service olumes, 1950+

Loose-leaf. Dictionary arrangement; comprehensive articles with bibliographies. First edition, entitled *Cyclopedia of medicine* was successor to *Sajous's analytic cyclopedia of practical medicine* Annual supplementary service volume. No author index.

510

Dechambre, Amédée, ed. Dictionnaire encyclopédique des sciences médicales. Paris. P Asselin, V Masson, 1864–1889 100v

Includes many brief biographies of major and minor medical figures of all centuries, some not cited elsewhere. Bibliographies vary in completeness, including books and periodical articles. Also useful for subject bibliographies.

511

Enciclopedia medica italiana. [Firenze]: Sansoni, 1 A–AZ+ [1950]+

Monumental, profusely illustrated encyclopedia, typical of the products of the fine Italian presses. Excellent signed, authoritative articles many are long, with bibliographies.

512

Encyclopédie médico-chirurgicale. Fondateurs: A Laffont et F Durieux. Traité de médecine, de chirurgie et des spécialités médico-chirurgicales sur feuillets mobiles constamment tenus à jour Paris (Editions Techniques) v 1 1932+

Subtitle varies International contributors, but majority French. Classified arrangement. One of the few European loose-leaf publications, but of cumbersome size and with unsatisfactory type of binder Superseded articles may be found at the Armed Forces Medical Library

513

Gamna, Carlo. Medicina interna Torino Unione Tipografico-Editrice Torinese 1949–50. 5v

An extensive treatise, written with the collaboration of F Ceresa and A. Galeone. V 5 "Malattie del sistema nervoso," by Nino Valobra. No bibliographic references given.

514

Mohr, Leo, and Staehelin, Rudolph, eds. Handbuch der inneren Medizin. 4 Aufl. hrsg von Gustav von Bergmann, W Frey und H. Schwiegk. Berlin: Springer 1951+ 9v

Comprehensive and detailed. Profusely illustrated. Good bibliographies. Incomplete.

515
Nelson new loose-leaf medicine, prepared under the direction of an advisory board by the world's leading medical authorities. Ed-in-chief: W W Herrick. New York and London: Nelson, 1920–49. 8v and index.
Earlier title: *Nelson loose-leaf medicine.* Binder's title: *Nelson loose-leaf living medicine.* By many English and American collaborators. No author index. Superseded articles may be found at the Library of the New York Academy of Medicine. V 8 is service volume.

SEE ALSO Allen (no. 505)

SEE ALSO Fowler (no. 1345)

516
Oxford medicine, by various authors; ed. by Henry A. Christian and Sir James Mackenzie. New York: Oxford Univ Pr 1920+ 8v and index.
Typical loose-leaf system of medicine by English and American specialists, profusely illustrated and with good bibliographies. Pages are dated, and authors indexed. Superseded articles may be found at the Library of the New York Academy of Medicine.

SEE ALSO *Oxford loose-leaf surgery* (no. 1839)

517
Pratique médico-chirurgicale; publiée sous la direction de André Lemierre, H. Mondor A. Ravina, et J Patel. 4. éd. Paris: Masson, 1952 53. 10v
Profusely illustrated encyclopedia

518
Tice, Frederick, ed. Practice of medicine R. R. Grinker, E. K. Shelton, and M. M. Wintrobe, advisory eds. Hagerstown, Md. Prior 1931+ 10v
Practical, illustrated loose-leaf system. Occasional bibliographies. No author index. Revised pages should be dated when received. Superseded articles may be found at the Library of the New York Academy of Medicine.

SEE ALSO Lewis (no. 1835)

519
Traité de médecine; publié sous la direction de A Lemierre Ch. Lenormant, Philippe Pagniez, [*et al.*] Paris: Masson, 1948–53. 17
Extensive illustrated treatise. Volumes can be purchased separately I: Maladies infectieuses [Pt. 1] 1948, 1,006p.; II Maladies infectieuses [Pt. 2] et parasitaires, 1948, 955p.; III Tuberculose, cancer syphilis, 1951 910p.; IV Avitaminoses, intoxications, maladies par agents physiques, anaphylaxie, accidents sériques, 1948, 895p.; V: Maladies de l'appareil respiratoire, 1948, 1,165p.; ▼ VI. Tuberculose pulmonaire, 1952, 558p., ▼ VII: Maladies du tube digestif et de ses annexes, 1948, 1,063p. ▼ VIII Maladies du foie et du pancréas, 1948. 1,168p., IX: Maladies de la nutrition, 1949 853p.; X: Maladies du coeur 1948, 1,167p.; XI Maladies des vaisseaux, 1948, 545p. ▼ XII Maladies du sang et des organes hématopoïétiques, 1949, 727p. XIII Maladies des glandes endocrines, 1948, 1,119p.; ▼ XIV: Maladies des reins, 1949 920p.; ▼ XV Maladies du système nerveux [Pt. 1] 1949 1,254p.; ▼ XVI Maladies du système nerveux [Pt. 2] 1949, 1,251p. XVII Maladies des muscles, des os, des articulations Rhumatismes chroniques; Addenda, Table générale, 1953, 1,061p.

DIRECTORIES OF ORGANIZATIONS

Societies

SEE ALSO Science—Directories of organizations.

520
American Medical Association. Guide to services. [2 ed.] [Chicago The Association, 1953.] 116p. Free.
Useful facts concerning the Association, names of divisions, councils, departments, committees including names of directors, chairmen, and members, list of publications. Numerous photographs.

521
——Council on Medical Service. Roster of executives of state medical associations and of editors of county medical society bulletins. Revised. Chicago: The Association, 1952. 19p.
Revised semiannually

522
Medical Economics, Inc. Directory of national medical societies. Rutherford, N.J.: Medical Economics, Inc., 1950 16p. Processed.
Information on 115 societies: address, year founded, number of members, and publications. Supplements information in *American medical directory.*

SEE ALSO the list of national medical associations appearing in the A.M.A. *American medical directory* (no. 278) and that published at intervals in the preliminary pages of the *Journal of the American Medical Association.*

Schools

Much important information concerning medical schools, particularly the foreign ones, can be found in the general directories of educational institutions, of which Winchell's *Guide* lists many. Among the most useful are, *Handbuch der deutschen Wissenschaft*; H. W. Hurt and M. E. Abbott's *The college blue book*, 6. ed. (Yonkers-on-Hudson: Christian E. Burckel, [1949]) 464p.; *Index generalis*; Mary Irwin, ed., *American universities and colleges*; * *Minerva; Jahrbuch der gelehrten Welt*; UNESCO's *Study abroad*; * *World of learning*.

523

American Medical Association. Council on Medical Education and Hospitals. Medical education in the United States and Canada. Chicago, 1 1901+ Free.

Canada included beginning 1932. Annual statistics. Reprinted, with additions, from the "Educational number" of the Association's journal. Description of schools arranged by state. Includes: courses available for practicing physicians, arranged by state; hospitals approved for training interns and approved residencies and fellowships; details concerning examining boards in medical specialties.

524 * *

Deitrick, John E., and Berson, Robert C. Medical schools in the United States at mid-century. New York: McGraw-Hill, 1953. 380p.

The formal report of the Survey of Medical Education organized in 1947 by the American Medical Association and the Association of American Medical Colleges. Evaluates data collected by Survey teams visiting the medical schools, covers functions, finances, administration, and curricula. Chapter 10 devoted to the library; library statistics in the appendix.

525

National Medical Fellowships. Negroes in medicine. Chicago: National Medical Fellowships, [1952] 44p.

Lists fellowships and scholarships available to negro candidates, enrollment of negroes in medical schools, and other information difficult to find.

526

Pan American Sanitary Bureau. "Schools of medicine and allied sciences in Latin America," *Boletín de la Oficina Sanitaria Panamericana*, 24 (1945) 832-43 (and as its Publication, no. 224, 1946)

No information other than name. Listed by subject, subdivided by country.

SEE ALSO UNESCO Centre (no. 65)

527 * *

World Health Organization. World directory of medical schools. Répertoire mondial des écoles de médecine. Genève: World Health Organization, 1953. 220p.

Lists information on more than 500 institutions by country and then by city. Data includes: year of founding, administrating body, academic year, admission requirements, size of teaching staff, total enrollment, number of annual admissions, language of instruction, number of years study required, degrees obtainable, annual number of graduates, and tuition fees. Geographic name indexes and text in both English and French. Material for the United States and Canada was taken from the *Journal of the American Medical Association*; otherwise, compiled as far as possible from direct questionnaires.

DICTIONARIES AND STUDIES OF TERMINOLOGY

Terminology

528

Agard, Walter R. Medical Greek and Latin at a glance. 2. ed. New York: Hoeber, 1937. 87p.

A guide to the derivation of medical terms.

529

Brown, Charles B. The contribution of Greek to English with special attention to medical and other scientific terms. Nashville: Vanderbilt Univ. Pr., [1942] 310p.

530

—— Contribution of Latin to English, with special attention to medical and other scientific terms and review exercises for self instruction. Nashville: Vanderbilt Univ. Pr., 1946. 46p.

531 * *

Harned, Jessie M. Medical terminology made easy. Chicago: Physicians' Record Co., 1951. 275p.

One of the most practical books for the student. The arrangement and emphasis are entirely different from Jaeger (no. 532) and Pepper (no. 533). The grouping of words around anatomic systems and their use in sample case records is a new practical approach. Useful list of abbreviations and of medical equivalents of lay terms.

532 * *

Jaeger Edmund C. A source book of medical terms. Springfield, Ill.: Thomas, [1953] 145p.

An alphabetic list of the word elements, combining forms, prefixes and suffixes, with emphasis on etymology. Gives basic principles for the construction or synthesis of words. Occasional historical information and illustrations.

533 *

Pepper O. H. Perry Medical etymology; the history and derivation of medical terms for students of medicine, dentistry and nursing. Philadelphia: Saunders, 1949. 263p.

Divided into pre-clinical subjects, clinical subjects, and dentistry. Greek and Latin derivations indicated and explained.

534 * *

Skinner Henry A. L. The origin of medical terms. Baltimore: Williams & Wilkins, 1949. 379p.

Extensive historical treatment, with special attention to eponyms; quite different from Jaeger (no. 532) Pepper (no. 533) and Harned (no. 531)

535

Spilman, Mignonette. Medical Latin and Greek. 2. ed. Salt Lake City: The Author 1949 139p. Processed.

Derivation of medical terms. For sale by Edwards Bros., Ann Arbor Mich.

536

Swart, Joseph. Analysis of words pertaining to anatomy physiology diseases and surgery for students and physicians. 2. ed. Kansas City Kans.: The Author [1938] 125p.

Classified arrangement. Prefixes, suffixes, and combining forms are given, with illustrative lists of words. Under each organ or region are listed terms descriptive of its pathology. Helpful in acquiring medical vocabulary.

SEE ALSO Clairville (no. 546) Foster (no. 547) Kaja (no. 548); Laurent (no. 549); Pfaffrp (no. 554)

Abbreviations

Only one dictionary of strictly medical abbreviations has been noticed, but general dictionaries of abbreviations contain many terms in the scientific field. Some of these are: E. F. Allen. *Allen dictionary of abbreviation and symbols* G. E. Shankle's *Current abbreviations* H. J. Stephenson *Abbrevs. (dictionary of abbreviations)* U.S. Library of Congress, Reference Department, *Russian abbreviations;* O. T. Zimmerman and Irwin Lavine' *Scientific and technical abbreviations signs and symbols.* Further details can be found in Winchell' *Guide*

537 * *

Peyser Alfred. Pars pro toto; breviarium medicum internationale. Stockholm. Almqvist & Wiksell, [1950] 196p.

Lists abbreviations currently employed in English, German, Danish, French, Spanish, Italian, Swedish, and Latin, also those of international significance, and gives complete term for each. Symbols indicate language of origin and subject field to which term is common. An extremely useful companion volume to Shankle, mentioned above.

Dictionaries

English

538 *

Blakiston new Gould medical dictionary modern comprehensive dictionary editors: Harold Wellington Jones, Normand L. Hoerr Arthur Osol. Philadelphia Blakiston, 1949 1,294p.

One of the standard dictionaries Eponyms and biographic references included. Based on fifth edition of Gould but entirely rearranged. Includes useful tables of bones, muscles, arteries, nerves, diets, hormones, phobias, etc. Blakiston also publishes *Blakiston Illustrated pocket medical dictionary* 1952, 1,005p., with 33,000 terms.

539

Comrie, John Dixon, ed. Black's medical dictionary 21. ed. London: Black, 1953. 1,012p.

Standard British dictionary Differs from Dorland and Stedman in combining dictionary features with those of very abridged encyclopedia. Includes notes on treatment. Not so comprehensive as the standard American medical dictionaries.

540

Dorland, William A. N. The American illustrated medical dictionary complete dictionary of the terms used in medicine, surgery dentistry pharmacy chemistry, nursing, veterinary science, biology and medical biography; with the pronunciation, derivation, and definition. 22. ed. Philadelphia Saunders, 1951. 1,736p.

One of the most useful of the standard medical dictionaries, frequently revised and comprehensive. Includes names and dates of birth and death of medical persons whose

names are associated with diseases, treatments, instruments, etc., with many portraits. Also in condensed form, *American pocket medical dictionary* (Philadelphia: Saunders, 1953) 639p.

541

The Faber medical dictionary; edited by Sir Cecil Wakeley. London: Faber 1953. 471p.

A concise and comprehensive dictionary intended not only for doctors but also for members of allied professions. Pronunciation and derivation given. Contains some 27,000 definitions. American edition entitled *Macmillan medical dictionary*

542 *

Stedman, Thomas L. Medical dictionary 18. ed. Ed. by Norman Burke Taylor in collaboration with Allen Ellsworth Taylor. Baltimore: Williams & Wilkins, 1953. 1,561p.

One of the standard dictionaries. Earlier editions entitled *Practical medical dictionary*. Comprehensive and revised frequently. Illustrated. Biographic information only given for eponyms. Contains useful etymologic guide and word list, weights and measures, temperature scales, table giving new nomenclature adopted by Anatomical Society of Great Britain and Ireland in Latin and English with the Basle [BNA] equivalent, not found in Dorland (no. 540) or Blakiston (no. 538). There is also Stedman's *Shorter medical dictionary* (Chicago: Wilcox & Follett, 1950) 635p.

543

Taber, Clarence W. ed. Cyclopedic medical dictionary including digest of medical subjects: medicine, surgery, nursing, dietetics, physical therapy. 6. ed. Philadelphia: Davis, 1953. 1,312p.

A revision of his *Taber's medical dictionary*. Includes 60,000 words. Not so comprehensive as Dorland or Stedman, but adequate for students, and less expensive.

see also Chambers (no. 67); Hough (no. 68); Henderson (no. 782) and Special Subjects by name of subject

Polyglot

544

Airas, Väinö, ed. Teknillinen sanasto: saksa, englanti, suomi, ruotsi. Technical vocabulary: German, English, Finnish, Swedish. Helsinki: Kustannusosakeyhtiö Otava [1940] 1,231p.

Arranged under the German term. An index of Finnish, Swedish, and English words will be published. Medical and chemical terms included.

545

Biraud, Yves. "Polyglot glossary of communicable diseases; contribution to the international nomenclature of diseases," *Bulletin of the Health Organisation* [League of Nations] 10 (1944) 201–556.

A useful glossary of diseases in Latin and 24 other languages.

546 * *

Clairville, Alexandre L. Dictionnaire polyglotte des termes médicaux—français, anglais, allemand, latin. 2. éd. Paris: S.I.P.U.C.O., 1953. 1,186p. Portuguese suppl. 1953. 370p. Spanish suppl. 1953. 360p.

Main portion in French includes 19,000 numbered terms, with English, German, and Latin cited for each. Keys to the other languages refer to French numbered term. An Italian supplement and an Arabic supplement are to be issued shortly

547

Foster, Frank P. An illustrated encyclopaedic medical dictionary; being a dictionary of the technical terms used by writers on medicine and the collateral sciences, in the Latin, English, French, and German languages. New York: Appleton, 1888–93. 4v. in 12 pt., paged continuously. 3,095p.

Both a language and an informational dictionary. All four languages in one alphabet. Definitions are in English. Includes botanical and pharmaceutical terms. While somewhat out of date, it cannot be surpassed for its period and earlier

548

Kajava, Yrjö H., and Palmén, Arne J. Saksalais-ja latinalais-suomalainen lääketieteellinen sanasto [German- and Latin-Finnish medical dictionary] 7. ed. Helsinki: Sddecim, [1950] 314p.

Under the auspices of Duodecim Seuran. A helpful glossary

549

Laurent, Emile. Lexicum medicum polyglottum (terminologie médicale en huit langues) français, Latinum, deutsch, English, italiano, español, portuguez, russkii. 2. ed. Paris: Maloine. 1906. Various paging

Arrangement somewhat similar to Meyer (no. 552). Entry under French terms, with references from the other seven languages. Includes Latin and Portuguese not in Meyer. Outmoded but included for Russian terms.

550

Lejeune, Fritz. Die Brücke; klinische Bilder in sechs Sprachen. Ein Hilfsbuch für Ärzte bei der Behandlung fremdsprachiger Patienten. Leipzig: Thieme, 1941. 690p.

Comprehensive handbook to help doctors with foreign patients. Arranged by diseases. Covers German, English, French, Italian, Spanish, and Portuguese.

551

Marie, Joseph S. F English, German, French, Italian, Spanish medical vocabulary and phrases. Philadelphia: Blakiston, [1939] 358p.

Vocabulary with key word in English. Somewhat similar to Meyer (no. 552) but more modern, with fewer languages. Of practical value with foreign patients. Out of print.

552

Meyer J lius, ed. Medizinisches Taschenlexikon in 8 Sprachen (deutsch, englisch, französisch, italienisch, japanisch, russisch, spanisch, ungarisch) Berlin Urban & Schwarzenberg, 1909 788p.

Useful although out of date. Main entry is under German term with key from the other seven languages. Especially useful for Hu garian and Russian.

553

Parry S. Chalmers. Polyglot medical questionnaire in twelve languages, with digital system of communication. London. Lewis, 1953 62p.

With no language in common with patient, doctor points to numbered question and patient looks it up in his language and answers yes or no; 191 questions in 12 la guages.

554

Philipp, Julius Terminologia morborum latein isch tschechisch-deutsche Terminologie der Krankheiten. Praha Topička, 1937 189p.

A dictionary of names of diseases. Entry under Latin term, with German nd Czech ndexes. Out of print.

555 *

Veillon, Emmanuel, *et al.* Medical dictionary Dictionnaire médical. Medizinisches Wörterbuch. London: Lange, Maxwell & Springer 1950. Pt. 1, English-French-German, 496p Pt. 2, Français llemand-anglais, 435p Pt. 3, Deutsch-englisch französisch, 476p.

Each part lphabetized according to key language with equivalents in others; 25,000 terms. Also available in Swiss edition (Bern Huber [1950])

Arabic

556

English Arabic medical dictionary Issued with *Journal f the Faculty of Medicine of Iraq* 1947 v 11 no. 5–6, 1948 v.12, no. 1–6· *Journal of the Faculty of Medicine* Baghdad, .13, 1949 no. 1+

557

Sharaf, Mohammed. An English-Arabic dictionary of medicine, biology and allied sciences. 2. ed. Cairo Government Pr 1928. 971p.

Includes anatomic, pharmaceutical, and botanic terms.

SEE ALSO Clairville (no. 546)

Bohemian

SEE Philipp (no. 554)

Bulgarian

558

Meditsinski entsiklopedichen rechnik Sofia (Lekarska kooperatsiia [1+ 1949+

Encyclopedic medical dictionary in Bulgarian. Many Latin equivalents given.

Chinese

559

Cousland, Philip B. Cousland' English-Chinese medical lexicon; rev and ed. by Teh-Ching Lee and P L. McAll. 8. ed., with new supplement. [n.p.] Chinese Medical Association, Council on Publications, 1937 390p. For sale by Kwang Hsueh.

Fairly comprehensiv e. Chinese words in Chinese characters. Tables of weights and measures and the abbreviations used in prescriptions.

Czech

SE Philipp (no. 554)

Danish

560

Secher Knud. Klinisk ordbog, udarbejdet af O. Bjerrum, M. Brun Pedersen, M. Christiansen [*et al.*] 2. udg. København Hoist, 1937 531p.

Dano-Norwegian medical dictionary limited to clinical terms. Not so comprehensive as the standard American dictionaries.

Dutch

561

Coelho, Maurice B. Practisch verklarend zakwoordenboek der geneeskunde. 4. druk. Gravenhage: Van Goor 1953. 678p.

Medical dictionary in Dutch.

562
Schuurmans Stekhoven, Willem. Geneeskundig woordenboek: Nederlands-Engels, Engels-Nederlands. Amsterdam de Bussy 1949 289p
Useful Dutch-English medical dictionary

Flemish

SEE Ahrens (no. 544) Kajava (no. 548)

French

563
Dabout, Eugène, and Neveu, Raymond. Petit dictionnaire de médecine expressions techniques—termes médicaux. 2. éd. par R. Neveu. Paris Baillière, 1949 739p.
French dictionary of same type as Garnier (no. 564); they supplement each other

564
Garnier Marcel, and Delamare, Valéry Dictionnaire des termes techniques de médecine contenant les étymologies grecques et latines, les noms des maladies 16 éd rev par J Delamare. Paris Maloine, 1953 1 193p.
Medical dictionary in French of same type Dorland (no 540) and Stedman (no. 542) but less comprehensive.

565 * *
Lépine, Pierre. Dictionnaire français-anglais, anglais-français des termes médicaux et biologiques, vec la collaboration de Gilberte D Kriasnoff. Paris Editions Médicales Flammarion, [1952] 829p.
Easy to use, with extensive English section. Useful tables for conversion of temperature, weights, and measures.

566
Nouveau Larousse médical illustré publié sous la direction du Dr Galtier-Boissière vec la participation de nombreux spécialistes. Paris Larousse, [1952] 1,214p.
A semipopular profusely illustrated encyclopedic dictionary of medicine and the allied sciences. No biographic data

SEE ALSO Dictionaries—Polyglot (no. 544–553), De Vries (no. 69) Lejeune (no. 550) Mayer (no. 554) Obrya (no. 591); Patterson (no 596); Schober (no. 574) Triest (no 604)

German

567
Abderhalden, Rudolf. Medizinische Terminologie Wörterbuch der gesamten Medizin und der verwandten Wissenschaften. Basel Schwabe, [1948] 1,214 columns.
Good definitions. Few pharmaceuticals included. List of eponymic names, giving dates of birth and death, profession, and country of origin.

568 * *
De Vries, Louis. German-English medical dictionary New York. McGraw Hill, 1952. 596p.
This dictionary of 40,000 terms seems to have been compiled from a selection of the terms with their definitions contained in Lang's dictionary (no. 571) to which have been added nonmedical terms in general use. Less comprehensive than Lang.

569
Dornblüth, Otto W A. J Klinisches Wörterbuch neubearb. von Willibald Pschyrembel. 100/106. Aufl. mit Anhang: Die neuen Nomina anatomica. Berlin: de Gruyter 1952 1,038p.
Not so comprehensive as Volkmann (no 577), but usable and less expensive. Special emphasis on recent terms, those of foreign (to German) origin, and eponyms. The anatomic supplement gives the accepted Latin nomenclature with German explanations.

570
Frank, John G., and Hammer Carl, Jr Deutsch für Mediziner New York Harper 1941 166p. (Harper's German series.)
Excerpts from German medical works as reading exercises. Good German-English vocabulary

571 *
Lang, Hugo. Lang's German-English dictionary of terms used in medicine and the allied sciences with their pronunciation. 4. ed. by M. K. Meyers. Philadelphia: Blakiston, [1932] 926p.
The best German-English dictionary of medical terms. Out of print, but still useful. Contains 56,500 medical terms. May be supplemented for modern words by several later works Schoenewald (no. 575 and 576) De Vries (no. 568); and Lejeune (no. 572)

572 *
Lejeune, Fritz. German-English, English-German dictionary for physicians. Stuttgart Thieme, 1951–53. 2 V 1, German-English, 1,348p. V 2, English-German, 1,737p.
Useful, comprehensive, but pocket-sized. Includes over 43,000 terms. A good companion volume to Lang (no. 571) and De Vries (no. 568)

573
Mainland, W F German for students of medicine and science, with notes, grammati-

cal introduction and vocabulary Edinburgh Oliver & Boyd, [1937] 160+xl 8p.

Exercises illustrative of various subjects, with a good vocabulary

574

Schober Paul, and Pschyrembel, Willibald. Medizinisches Wörterbuch der deutschen und französischen Sprache. 7 Aufl. Stuttgart: Enke, 1949 448p.

Standard work. 1 ed., 1898. Comprehensive, and covers related sciences.

575

Schoenewald, Friedrich S. English German medical dictionary Philadelphia Blakiston, 1951. 242p.

Companion volume to Schoenewald (no. 576) See annotation below

576

—— German-English medical dictionary Philadelphia. Blakiston, 1949 241p.

An unusual work which is in a sense phrase dictionary not just a glossary of words. Especially designed to aid those who write in foreign language, as well as an aid to direct translation. Forms companion volume to the English-German Schoenewald (no. 575) Volumes can be purchased separately and can best be used in conjunction with one of the standard bilingual medical dictionaries, for example, Lang (no. 571)

577

Volkmann, Herbert. Medizinische Terminologie; Ableitung und Erklärung der gebräuchlichen Fachausdrücke aller Zweige der Medizin und ihrer Hilfswissenschaften 35. Aufl. von Kurt Hoffmann. Berlin Urban & Schwarzenberg, 1951. 1,130 columns.

Early editions as W Guttmann *Medizinische Terminologie* One of the more comprehensive German dictionaries. In 1970, Walter Guttmann adopted his wife name, Marie, so that the title pages of the 23–24. Aufl. (1930) and some subsequent editions read *Guttmann's medizinische Terminologie* von Walter Marle.

578

Waller Joseph R., and Kaatz, Moritz. German English medical dictionary 7 ed., with suppl. Rev by F Von Bruitenberg. London Allen & Unwin, [1950] 244p.

Pocket dictionary for the travelling physician. Illustrations of word endings, tables of chemical elements, measures, temperatures, and abbreviations.

SEE ALSO Science—Dictionaries (no. 70–72); Dictionaries—Polyglot (no. 544–55); Gonzalez-Campo de Cos (no. 609); Jablonsky (no. 601); Lejeune (no. 550); Noyan (no. 615); Patterson (no. 897); Römpp (no. 898); Takashima (no. 593)

Hawaiian

579

Handy Edward S. C., Pukui, M. K., and Livermore, Katherine. Outline of Hawaiian physical therapeutics. Honolulu: Bishop Museum, 1934 51p. (Bernice P Bishop Museum. Bulletin no. 126.)

Glossary of Hawaiian medical terms, with list of medicinal plants. Includes Hawaiian medical customs and medical folk-lore.

Hebrew

580

Masie, Aaron M. Sefer ha-munahim li refuah ule mada e ha-teva. Dictionary of medicine & allied sciences, Latin English-Hebrew ed. by S. Tchernichowsky Jerusalem: [n.p.] 1934 787p.

Excellent Hebrew dictionary Latin and English terms are in one alphabet with Hebrew in opposite column.

Hungarian

581

Lee Delisle, Dora. 4000 orvosi műszó angolul-magyarul, magyarul angolul. Debrecen: Magyar Könyvkereskedés, [1953] 206p.

Pronunciation and brief definitions of common medical terms. English-Hungarian and Hungarian-English.

SEE ALSO Meyer (no. 552) Lang (no. 602)

Italian

582 *

Arderi, John P Italian-English medical dictionary Rome: Tip. Consorzio Nazionale, 1931 194p.

Not comprehensive, but useful for translation. Index of terms arranged by organs and regions of the body

583

Catalini, Giulio. Dizionario di medicina per medici famiglie. 3. ed. [Torino] Unione Tipografico-Editrice Torinese, [1951] 2v

Comprehensive encyclopedic medical dictionary in Italian. Modern, much longer descriptions than in Ferrio (no. 584) Much emphasis on gymnastics and public health work in Italy Profusely illustrated. Less useful for translating than Ferrio.

584

Ferrio, Luigi. Terminologia medica. 3. rev Torino: Unione Tipografico-Ed. Torinese, 1946. 759p

Comprehensive dictionary in Italian. Same type as Dorland (no. 540) and Stedman (no. 542) Good definitions and Latin terms. Not so comprehensive as Casalini (no. 583) but more compact and more practical for translation.

585

Helder M. P Dizionario medico Italiano-Inglese, Inglese-Italiano. Torino: Lattes, [1952] 543p.

To help Italian doctors to understand English medical literature. Over 30,000 English words defined in Italian. Italian-English part is brief.

586

Marconi, Ruggero, and Zino, Elena. Dizionario inglese italiano per le scienze mediche. Torino Minerva Medica, [1949] 565p.

English-Italian technical medical dictionary of over 40,000 terms.

SEE ALSO Clairville (no. 546); Laurent (no. 549) Lejeune (no. 550); Marie (no. 551); Meyer (no. 552)

Japanese

587

Hashimoto, Sesai. Kleines medizinisches Wörterbuch japanisch-deutsch-lateinisch. 8. ed. [Tokyo: Kanehara, 1941.] 502p

For students. Terms are arranged by Japanese transliteration, with equivalents in German, Latin, and Japanese notation.

588

——Medizinisches Lexikon; 150,000 Wörter deutsch-lateinisch-japanisch. [10. ed.] [Tokyo: Kanehara, 1934] 1,204p.

J panese notation only no transliteration. Sparsely illustrated.

589

Held, Mutsuo, and Nakano, Yasuji. German-English-Japanese new medical dictionary [Tokyo: Tozai Igaku Sha, 1950] 485p.

German terms followed by equivalents in English and in Japanese notation.

590

Kusama, Yoshio. English-Japanese concise medical dictionary Tokyo Nippon Iryo Syuppar [1948] 433p.

Authoritative. Japanese words given in Japanese characters only

591

Obya, Zensetsu. Petit dictionnaire français-japonais des termes techniques de médecine. Paris: Masson, 1933. Tokyo: Kanehara 1933. 376+86p.

French-Japanese dictionary Japanese words in Japanese characters only

592

Omochi, Shoji. Simplified medical dictionary [Tokyo] Fukashi, [1952] 2v

V 1, English-Japanese, has English terms with phonetic spelling and J panese notations. V 2, Japanese-English, has Japanese notation with brief English definition and phonetic spelling

593

Takasima, Reizo. Pocket Japanese-English German medical dictionary Tokyo: Bunkodo, [1951] 256p.

Key words in transliterated Japanese followed by Japanese characters.

SEE ALSO Meyer (no. 552)

Malayan

594

Gimlette, John D. A dictionary of Malayan medicine: ed. by H. W Thomson. London Oxford Univ Pr 1939 259p.

A guide to Malayan medical practices and customs as well as a language dictionary Under the Malayan names of plants and herbs are given the names in English and Latin, their descriptions, their uses and legends in Malay folk medicine. Under the names of organs are found the many vernacular terms and their connotations. Brief classified index in English.

Norwegian

595

Evang, Karl. Norsk medisinsk ordbok. 3. utg. Oslo: Sem & Stenersen, 1947 340p.

Technical dictionary of over 11,000 terms, with key to their place in the coding system of the State Health Insurance Bureau, Oslo.

SEE ALSO Sacher (no. 560)

Polish

596

Giedroyć, Franciszek. Polski słownik lekarski. Warszawa Kasa im. Mianowskiego, 1931–33 2v

Comprehensive dictionary in Polish. Includes ma y Latin and some French and German equivalents.

597

Tomaszewski, Wiktor Słownik lekarski angielsko-polski i polsko-angielski. English-Polish and Polish English medical dictionary 2. ed. Edinburgh Livingstone, 1953. 304p.

English-Polish and Polish English wordbook. An appendix of genetic and cytologic

terms, prefixes and suffixes, abbreviations, weights and measures, notes on prescription writing, illustrations of instruments with names, and other useful features.

Portuguese

598

Fernandes, Enrico. Dicionário médico inglês-português baseado no dictionário médico de Gould. Rio de Janeiro: Editôra Gertum Carneiro, 1947. 1,099p.

Excellent dictionary. Adapted from Gould. Over 40,000 terms. List of abbreviations and conversion tables for weights, measures, and temperatures.

599

Fortes, Hugo. Dicionário médico inglês-português. Rio de Janeiro: Gráfica Olímpica, [1945] 329p.

No definitions; pronunciation guides only for the English terms, none for the Portuguese. About 18,000 words.

600

Pinto, Pedro A. Dicionário de têrmos médicos. 5. ed. Rio de Janeiro: Editora Científica, 1949. 424p.

Dictionary in Portuguese with short definitions.

SEE ALSO Beadnell (no. 73); Clairville (no. 546); Laurent (no. 549); Lejeune (no. 550); Mello-Leitão (no. 785)

Russian

601

Josalewsky, Wolf, and Eugensohn. Deutsch-russischer und russisch-deutscher Sprachführer für die ärztliche und pharmaceutische Praxis. Leipzig: Thieme, 1909. 272p.

While not comprehensive or modern, it is the only such work. Arranged by subject, e.g. parts of the body, drugs, bandages, surgical instruments. Has good phraseology; Russian words transliterated as well as in Russian.

602

Láng, Imre. Orosz-magyar és magyar-orosz orvosi szótár. Budapest: Akadémiai Kiadó, 1951. 398+312p.

Russian-Hungarian, Hungarian-Russian technical medical dictionary. Defines briefly about 30,000 terms and includes many Latin equivalents.

603

Sankin, S. L., and Trius, M. V. Nemetsko-russkiĭ meditsinskiĭ slovar; pod redaktsieĭ O. I. Bronshteĭna. Moskva: Gosudarstvennoe Meditsinskoe Izdatel'stvo, 1930. 638 columns.

Brief Russian definitions of 22,000 German medical terms. For the Russian physician who reads German.

604

Trius, M. V., and Ikhok, G. A. Frantsuzsko-russkiĭ mediko-biologicheskiĭ slovar': pod redaktsieĭ O. I. Bronshteĭna. Moskva: Gosudarstvennoe Izdatel'stvo Biologicheskoĭ i Meditsinskoĭ Literatury, 1935. 594 columns.

Brief Russian definitions of French medical and biologic terms.

SEE ALSO Callaham (no. 74); Laurent (no. 549); Mayer (no. 894); Meyer (no. 552); Perry (no. 75)

Spanish

605

Cardenal Pujals, León, ed. Diccionario terminológico de ciencias médicas. 4. ed. por E. Capdevila Casas. Barcelona: Salvat, [1952] 1,378p.

Technical dictionary in Spanish of the Dorland and Stedman type but less comprehensive.

606

Dabout, Eugène. Diccionario de medicina; expresiones técnicas, términos médicos. 2. ed. Barcelona: Pubul, 1949. 916p.

For physicians and medical students. Etymologies.

607 ★

Goldberg, Morris. English-Spanish chemical and medical dictionary: comprising terms employed in medicine, surgery, dentistry, veterinary, biochemistry, biology, pharmacy, allied sciences, and related scientific equipment. New York and London: McGraw-Hill, 1947. 692p.

Includes terms for new drugs and methods; 40,000 terms, with brief definitions of Spanish terms.

608 ★

—— Spanish-English chemical and medical dictionary. New York and London: McGraw-Hill, 1952. 609p.

Companion volume to the English-Spanish volume (no. 607)

609

González-Campo de Cos, José. Diccionario médico alemán-español y español-alemán. Madrid: M. Marín & G. Campo, 1944. 2v. in 1. Paged separately. 323+260p.

Includes 30,000 terms. No definitions but many equivalent terms. Occasional portraits.

610

McElligott, Maurice G. Spanish-English

medical dictionary London Lewis, 1946. 249p.
A useful, compact dictionary of over 15,000 terms.

611
Moll, Aristides A. Medical Spanish. (El español para el médico.) Chicago: A. M. A 1925 133p.
Not a dictionary but it includes an excellent section on the phrases used in taking histories or in hospital work and good vocabulary arranged by subject. Weights, measures, and samples of prescriptions in Spanish.

612
Plans y Sanz de Bremond, F and Turner C. G Diccionario inglés-español y español-inglés de términos médicos y biológicos. Madrid Librería Editorial Científico Médica, 1947 776p.
A good dictionary Not so comprehensive as Goldberg (no. 607–08) Grammar aids, pronunciation and reading guides for English, not for Spanish.

613
Stedman, Thomas L. Diccionario práctico de medicina Traducción directa de la edición norteamericana por Gustavo Pittaluga. La Habana. Cultural, [1948] 1444p.
Spanish translation of 16. edition of *Stedman's practical medical dictionary* (no. 542)

SEE ALSO Clairville (no. 546) Laurent (no. 549) Lejeune (no. 550); Marie (no. 551) Meyer (no. 552)

Swedish

614
Wernstedt, Wilhelm E. Medicinsk terminologi. 3. uppl. Stockholm. Nordiska Bokhandeln, 1951 560p.
Typical medical dictionary patterned on Dorland and Volkmann.

SEE ALSO Airas (no. 544)

Turkish

615
Noyan, Fazil, and Gürson, Cihad Tahsin. Küçük tıp terimleri kılavuzu. [Istanbul] Ismail Akgün Matbaasi, 1947 272p. (LÜ T.B. Tıp Fakültesi. Talebe Cemiyeti Yayinlari, no. 23.)
Medical dictionary in Turkish with equivalents in English, French, and German.

SPECIAL SUBJECTS

ADRENOCORTICOTROPIC HORMONE (ACTH CORTISONE)

SEE ALSO Endocrinology

Bibliographies indexes abstracts

616
U.S. Army Medical Library The pituitary adrenocortical function ACTH, cortisone and related compounds: bibliography comp. by Karl A. Baer and Marjory Spencer Washington The Library 1950. 366p Processed.
Subject arrangement Covers 1940 to 1950

617
U.S. National Heart Institute. Abstracts of research papers in the field of adrenal and pituitary glands and extracts. Bethesda, Md. The Institute, [1950] 84p. Processed.
Full abstracts. Covers 1928 through Oct. 1, 1949 From material compiled by the Squibb Institute for Medical Research. No author index. Arrangement is by broad subject.

AGRICULTURE

SEE Botany and agriculture.

ALCHEMY AND ASTROLOGY

Bibliographies

618
Duveen, Denis L Bibliotheca alchemica et chemica, an annotated catalogue of printed books on alchemy chemistry and cognate subjects in the library of. London Weil, 1949. 669p. Suppl. New York: Kraus, [1953] 98p.
Excellent annotated catalog of books now in the Library of the University of Wisconsin. Arranged by author with supplementary name index.

619
University of Glasgow Catalogue of the Ferguson collection of books, mainly relating to alchemy chemistry witchcraft and gipsies, in the library of. [Glasgow] Maclehose, 1943. 2

Checklist of volumes from the library of John Ferguson, the historian of chemistry

Biographies

620

Waite, Arthur E. Lives of alchemystical philosophers. London: Redway 1888. 315p.
Short, readable biographies through the seventeenth century with a catalog of works on hermetic philosophy and alchemy

Histories

621

Berthelot, P. E. Marcellin. Introduction à l'étude de la chimie des anciens et du moyen-âge. Nouv tirage. Paris: Librairie des Sciences et des Arts, 1938. 330p.
A companion volume to the following entry containing material extracted from manuscripts, with annotations, index, detailed table of contents

622

—— Les origines de l'alchimie. Paris: Steinheil, 1885. 445p.
A discussion of ancient alchemy with chapter on "théories alchimiques et théories modernes." With index and detailed table of contents

623

Hopkins, Arthur J. Alchemy child of Greek philosophy. New York, Columbia Univ Pr 1934. 262p.
A brief survey with bibliography

624

Lippmann, Edmund O. von. Entstehung und Ausbreitung der Alchemie. Berlin: Springer 1919–31. 2v
Exhaustive history of alchemy in ancient times, well documented, with Greek and Latin indexes

625

Read, John. The alchemist in life, literature and art. London, Nelson, [1947] 100p.
Brief and readable, with glossary and illustrations, especially useful for the latter

626

—— Prelude to chemistry; an outline of alchemy. London: Bell, 1936. 327p.
A general history with bibliography. Devoted especially to the later periods. A companion to his *Humour and humanism in chemistry* (no. 873)

627

Taylor, F. Sherwood. The alchemists, founders of modern chemistry. New York: Schuman, [1949] 246p.
Excellent and readable study of the contribution of alchemy to chemistry through the seventeenth century. With illustrations and bibliography. English edition published by Heinemann, 1952.

628

Thompson, Charles J. S. The lure and romance of alchemy. London: Harrap, [1932] 248p.
Popular history

629

—— The mystery and romance of astrology. London, Brentano, [1929] 296p.
Popular history with a chapter on astrology and medicine.

630

Waite, Arthur E. The secret tradition in alchemy: its development and records. London, K. Paul, Trench, Trubner 1926. 415p.
A survey of the literature and history of alchemy emphasizing the mystic and religious aspects.

SEE ALSO Thompson (no. 1418)

ALCOHOLISM

SEE abstract, review or bibliographic sections of *Quarterly Journal of Studies on Alcohol*, *World Research in Alcoholism*.

ALLERGY

Bibliographies, indexes, abstracts

631

Allergy Abstracts. Brooklyn, N.Y. 1–8, 1936–43. Mimeographed.
Published by the Allergy Division of the Jewish Hospital of Brooklyn. Title varies. Classified arrangement. Continued in abstract section of *Journal of Allergy*

631.1

Quarterly Review of Allergy and Applied Immunology. Minneapolis, 1, 1947+
Beginning 1949 published under the auspices of the American College of Allergists. Consists of informative abstracts, book reviews, and "Current bibliography on allergy" by Jonathan Forman; the earlier parts of which were published in the *Letters of the International Correspondence Society of Allergists*. A total of 14 435 references listed through 1953.

SEE ALSO abstract, review or bibliographic sections of *Annals of Allergy: Interna-*

tional Archives of Allergy and Applied Immunology Journal of Allergy

Reviews

632 **

Progress in Allergy Basel, v 1, 1939+
Review articles with bibliographies. V 1 as *Fortschritte der Allergielehr*

Directories

633

American Academy of Allergy "Directory of fellows and members, *Journal of Allergy* 16 (1945) 204-08 256-60 308-12; 17 (1946) 48-52 115-17 183-85

New members are listed from time to time in the current volumes of the *Journal*. Professional information.

ALTITUDE PRESSURE AND DECOMPRESSION CHANGES

SEE ALSO Aviation medicine.

Bibliographies, indexes abstracts

634

Hoff, Ebbe C A bibliographical sourcebook of compressed air diving, and submarine medicine. Washington. U.S. Navy Bureau of Medicine and Surgery 1948-54. 2

Broad subject divisions in narrative form, broken down into minute subdivisions, each well documented. From earliest times to 1945 V 2 covers literature 1946-51 containing much on aviation medicine and unpublished material from government research institutes. Leon J Greenbaum collaborated on v 2.

Encyclopedias, guides, handbooks

635

National Research Council. Committee on Undersea Warfare A survey report on human factors in undersea warfare prepared by the Panel on Psychology and Physiology Washington The Committee, 1949 541p

A concise, but comprehensive, account of research on the efficiency of the individual under conditions such as are encountered in submarine. Each chapter by specialist, numerous references. Name and subject index.

ANATOMY HISTOLOGY EMBRYOLOGY

SEE ALSO Biology Technique Zoology and Special Subjects by name of subject.

Bibliographies, indexes abstracts

636

Anatomischer Bericht. Jena, v 1-45 1922-44

Modern, well-arranged abstract journal.

637

Haller Albrecht von. Bibliotheca anatomica. Leyden Haakiana, 1774-77 2v

The annotation for the author' *Bibliotheca medicinae* (no. 174) applies to this and his other bibliographies as well.

638

Jahresberichte über die Fortschritte der Anatomie und Entwicklungsgeschichte. Jena, n.s., v 1-20 1892-1914 Gesamtregister 1892-1901.

An abstract journal similar to the *Anatomischer Bericht* (no. 636) Supersedes the anatomic part of no. 639

639

Jahresberichte über die Fortschritte der Anatomie und Physiologie. Leipzig, 1-20, 1872-91

Supersedes *Bericht* *Anatomie* (no. 642) Title pages of v 13-20 read *Jahresbericht*. Good for the older foreign literature. Continued in two sections *Jahresbericht* *animalischen Physiologie* (no. 1464) and *Jahresberichte* *Anatomie und Entwicklungsgeschichte* (no. 638)

640

Krogman, Wilton M. A bibliography of human morphology 1914-1939 Chicago: Univ of Chicago Pr [1941] 385p.

Detailed classified arrangement.

641

Russell, Kenneth F A bibliography of anatomical books published in English before 1800, *Bulletin of the History of Medicine* 23 (May-June, 1949) 268-306.

Checklist with brief collation and occasional notes Most complete on the subject.

SEE ALSO *Biological Abstracts* (no 768b); *Excerpta medica* (no. 90) Section I; *International Catalogue of Scientific Literature* (no. 6) Sections O and P *Japanese Journal of Medical Science* (no. 120A); Murray (no 1870); *Soviet koe meditsina kое* (no. 130) *Tsentral'nyi* (no. 131) Series A *Year Book of Physiology Pathology Bacteriology and Anatomy* (no. 143N)

SEE ALSO abstract, review or bibliographic sections of *Acta anatomica* *Anatomischer Anzeiger*

Reviews

642

Bericht über die Fortschritte der Anatomie und Physiologie. Leipzig, 1856–71 (Abtheilung der *Zeitschrift für rationelle Medicin*)

A classified review of the year progress. Superseded by *Jahresberichte Anatomie und Physiologie* (no. 639)

643

Ergebnisse der Anatomie und Entwicklungsgeschichte. München and Berlin, 1–34, 1891 1944.

Early volumes as Abteilung 2 of *Anatomische Hefte*. Review journal useful for extensive bibliographies. Suspended 1915–20. V 23–31 1921–34, issued as *Zeitschrift für die gesamte Anatomie* 3. Abt. V 34, 1949, also as revised edition, 1952.

644

International Review of Cytology New York, 1 1952+

Published under auspices of the International Society for Cell Biology Good review articles with bibliographies.

Biographies

645

Dobson, Jessie. Anatomical eponyms. London Baillière, Tindall & Cox, 1946. 240p.

A valuable index, with brief biographic data and references to the original work from which eponym is derived.

For anatomists, SEE ALSO Eycleshymer (no. 677); American Association of Anatomists, "List of members, *Anatomical Record* 117 (October 1953) 294–343.

Histories

646

Choulant, Johann L. History and bibliography of anatomic illustration. T and ed. by Mortimer Frank. Additional sections by F H. Garrison and E. C. Streeter with new historical essay by Charles Singer and bibliography of Mortimer Frank, by J Christian Bay Rev ed. New York: Schuman, 1945 435p.

Originally published in German in 1852 V luable work, necessary in any medical historical collection.

647

Cole, Francis J. History of comparative anatomy from Aristotle to the eighteenth century London Macmillan, 1944. 524p.

An indispensable volume with illustrations, bibliography and biographic notes.

648

Corner George W Anatomy New York. Hoeber 1930. 82p. (Clio medica, no. 3.)

649

Hunter Richard H. A short history of anatomy 2. ed. London: J Bale, Sons & Danielsson, 1931. 86p.

650

Meyer Arthur W The rise of embryology Stanford Univ Calif.: Stanford Univ Pr [1939] 367p.

Detailed history with lengthy bibliography Chapters arranged by subject.

651

Needham, Joseph. A history of embryology Cambridge: Uni Pr 1934. 274p.

Detailed history arranged chronologically with bibliography

652

Portal, Antoine. Histoire de l'anatomie et de la chirurgie. Paris: Didot, 1770–73. 6v in 7

Exhaustive history including material on minor authors, with biographic and bibliographic notes, extracts from the writings of the authors cited. Useful "Tableau chronologique arranged by subject.

653

Singer Charles J The evolution of anatomy London K. Paul, Trench, Trubner 1925 209p.

Excellent history through Harvey Illustrated.

654

Singer Charles J and Rabin, C. A prelude to modern science, being a discussion of the history, sources and circumstances of the "Tabulae anatomicae sex of Vesalius. Cambridge: Univ Pr 1946. 58p. (Publications of the Wellcome Historical Medical Museum, new ser no. 1.)

Chapters on Italian predecessors of Vesalius; Galenic physiology and its Latin presentation; Renaissance anatomic ocabulary Valuable summary

655

Wegner Richard N. Das Anatomenbildnis. Basel Schwabe, [1939] 199p.

Excellent history of artistic anatomy with bibliography More material on the later periods than in Choulant (no. 646)

Encyclopedias, guides handbooks

SEE ALSO Technique.

656 * *

Anson, Barry J An atlas of human anatomy Philadelphia Saunders, 1950. 518p.

Useful to students and graduate physicians.

657

Bardeleben, Karl H. von, *et al.*, eds. Handbuch der Anatomie des Menschen Jena. Fischer 1896+ 8v in (?)

Issued originally in *Lieferungen*. Parts of eight volumes have appeared so far V 4, Abteilung 2, Teil 4, 1934 is the last part issued. Exhaustive work, profusely illustrated. Parts are sometimes sold separately

658

Bolk, Louis, *et al.*, eds. Handbuch der vergleichenden Anatomie der Wirbeltiere. Berlin Urban & Schwarzenberg, 1931–39. 6v and index.

One of the most exhaustive works on comparative anatomy

659

Cowdry Edmund V ed. Special cytology; the form and functions of the cell in health and disease. 2. ed New York. Hoeber 1932. 3v

Has excellent bibliographies The morphologic aspect of cytology is combined with discussions of physiologic function. It should not be confused with Cowdry' textbooks of cytology and histology

660

Ellenberger Wilhelm, and Baum, Hermann. Handbuch der vergleichenden Anatomie der Haustiere. 18. Aufl. bearb. von Otto Zietzschmann, Eberhard Ackerknecht, Hugo Grau. Berlin Springer 1943. 1 155p.

Detailed treatise, copiously and clearly illustrated (1,669 figures) with extensive bibliographies.

661

Hertwig Oscar ed. Handbuch der vergleichenden und experimentellen Entwickelungslehre der Wirbelthiere. Jena Fischer 1901–06. 3v

A very comprehensive reference work, one of the best.

SEE ALSO Mollendorff (no. 665) and under various subjects, e.g., Ophthalmology Duke-Elder (no. 1303) Such works should be consulted, since the embryology of the *different organs is often taken up in detail* in comprehensive works on organs or systems of organs.

662

Lanz, Titus von, and Wachsmuth, Werner Praktische Anatomie: ein Lehr und Hilfsbuch der anatomischen Grundlagen ärztlichen Handelns. Berlin Springer 1935+ 2 in 9

One of the best of the atlases of topographic anatomy Particularly helpful to the medical illustrator since normal parts of body are shown side by side with the detailed dissections differs from Pernkopf (no. 668) in that respect. V 1 pt. 3–4, are out of print and very few copies exist in this country V 1 pt. 2, is in preparation. Other parts in the planning stage.

663

Maisonnet, Joseph P and Coudane, R. Anatomie clinique et opératoire. Paris Doin, 1950. 3v

Useful to both physician and surgeon; 2,675 illustrations, diagrams, and drawings. Clinical applications emphasized.

664

Meschan, Isadore, and Meschan, R. M. F An atlas of normal radiographic anatomy Philadelphia Saunders, 1951. 593p.

Contains 1,044 illustrations.

665

Möllendorff Wilhelm von, ed. Handbuch der mikroskopischen Anatomie des Menschen. Berlin Springer 1927+ 7v in 20 pt., and supplements.

The most comprehensive work on histology Each organ and system taken up in exhaustive detail by many collaborators. Splendid bibliographies and illustrations. V 1 pt. 1; 2, pt. 1; 3, pt. 1; 4 pt. 1; 5, pt. 1 are out of print. V 4, pt. 2–3, and v 6, pt 5 in preparation. Will be kept up to date by supplements.

666

Needham, Joseph. Chemical embryology Cambridge Univ P 1931 3v

Comprehensive work on physiologic embryology Exhaustive bibliography Out of print.

667

Netter Frank H. The Ciba collection of medical illustrations. Summit, N J Ciba Pharmaceutical Products, Inc., [1953]+ 1+

I tended to portray the major anatomy and pathology of all systems of the body A separate volume for each system. 1 Nervous system. Excellent illustrations and diagrams in color with explanatory text.

668

Pernkopf, Eduard. Topographische Anatomie des Menschen, Lehrbuch und Atlas. 2. Aufl. Wien Urban & Schwarzenberg, 1943+ 4v in 6.

V 3 and 4 are 1. ed. V 3 issued 1952; v 4 in preparation. One of the best anatomic atlases. Illustrations, many in color are large, clear and plainly labeled. Differs from Lanz (no. 662) in approach.

669

Rauber August A. Rauber-Kopsch Lehrbuch und Atlas der Anatomie des Menschen. 18. Aufl. Leipzig: Thieme, 1951+ 3v

Practical anatomy Good illustrations. Same type as Spalteholz (no. 672–73) but more extensive. Beginning with the 12. ed., 1922, revised by Friedrich W T Kopsch.

670 *

Sobotta, Johannes. Atlas der deskriptiven Anatomie des Menschen. 13. Aufl. München: Urban & Schwarzenberg, 1953+ 3v

Practically unchanged from 12. ed., published in 1949 Practical anatomy; good illustrations.

671

—— Atlas of descriptive human anatomy Ed. and tr by Edward Uhlenhuth. New York, Hafner Pub. Co 1954. 3v

V 1–2, 6. English ed., 3, 5 English ed. V 1 ed. and tr from the 12. German ed v 2–3 ed. and tr from the 11 German ed.

672 * *

Spalteholz, Werner Hand-atlas of human anatomy Tr by Lewellys F Barker 7 English ed. Philadelphia Lippincott, 1949 3v in 1. 902p.

Reference atlas with excellent plates and detailed descriptions based on the 13. German edition. Reprint of 1937 issue.

673

—— Handatlas und Lehrbuch der Anatomie des Menschen, bearb. von R. Spanner 15 Aufl. Leipzig: Hirzel, 1953–54 2v in 4.

Each volume consists of two parts, plates with Latin captions and text in German. The 1,200 illustrations, many in color are practically all new and show much wider variety of approach than those in previous editions, but do not reach the high level of excellence of the earlier illustrations. Therefore, this edition should be used with one of the earlier German editions at hand.

674

Testut, Jean L. Traité d'anatomie humaine 9 éd. revue par A. Latarjet. Paris: Doin, 1948–49 5v

Practical topographic anatomy Not such good illustrations as Rauber-Kopsch (no. 669) Pernkopf (no. 665) or Lanz (no. 662)

675

Truex, Raymond C., and Kellner Carl E. Detailed atlas of the head and neck. New York. Oxford Uni Pr 1948. 162p.

Dissections are supplemented by drawings of skull to illustrate attachments of muscles and ligaments, series of bony landmarks and series of transverse sections. The 147 figures reconstruct a three-dimensional view of a given region.

676

Wolf-Heidegger Gerhard. Atlas der systematischen Anatomie des Menschen. Basel. Karger 1954+ 3v

A collection of many drawings, diagrams, and colored plates, with extensive legends but no accompanying text.

Dictionaries

677 * *

Eycleshymer Albert C., and Schoemaker Daniel M. Anatomical names, especially the Basle Nomina Anatomica ("BNA") with biographical sketches by Roy Lee Moodie. New York: Wood, 1917 744p.

Gives complete "BNA, classified list of 5,000 Latin terms used in anatomy as determined at the Basle conference, with an index for the English equivalents and translation of the Commission on Nomenclature's report. An invaluable guide to the terminology of body structure. Contains biographies of 800 anatomists. A British proposed revision of "BNA is to be found in Stedman, *Medical dictionary* 18. ed., 1953 (no. 542) p 1,551–59. Terms arranged in three columns to show differences between British proposal, Latin, and "BNA terms.

Recently an international committee on anatomical nomenclature was set up by UNESCO under the chairmanship of Dr George Washington Corner of the Carnegie Institution Department of Embryology It hopes to publish an agreed international nomenclature by 1955

678 *

Field, Ephraim J and Harrison, Richard J Anatomical terms; their origin and derivation. Cambridge, Eng.: Heffer [1947] 165p.

Includes brief biographic notes about famous anatomists, including many of eponymic interest.

679

Kopsch, Friedrich W T Die Nomina anatomica des Jahres 1895 (B.N.A.) nach der Buchstabenreihe geordnet und gegenübergestellt den Nomina anatomica des Jahres

1935 (I.N.A.) 4. Aufl. Leipzig: Thieme, 1950. 113p.

Arranged alphabetically by term in two parallel columns, B.N.A. and I.N.A. 4. edition is practically unchanged from the 3. edition, 1940.

480

Lambertini, Gastone. Dizionario anatomico: anatomici e morfologi e loro trovati. Napoli: Edizioni Scentifiche Italiane, 1949. 598p.

Glossary of anatomic terms in Italian. Stresses eponyms and gives brief biographic notes on anatomists.

SEE ALSO Henderson and Henderson (no. 782)

ANESTHESIA

Bibliographies, indexes, abstracts

481

Anesthesia Abstracts. *Minneapolis, Minn.*, v.1- 1937-+

V. 1-28 published by the Journal Club of the Section on Anesthesia, Mayo Clinic, Rochester Minn. From v. 29, 1950, on, published by John S. Lundy and Florence A. McQuillen. Abstracts periodical articles only. Includes blood and blood transfusion, besides anesthesia. Chiefly American and British. Dentistry covered. Cumulative index in every tenth volume.

482

Fulton, John F. and Stanton, Madeline E. The centennial of surgical anesthesia: an annotated catalogue of books and pamphlets bearing on the early history of surgical anesthesia, exhibited at the Yale Medical Library October 1946. New York: Schuman, 1946. 101p. (Yale University School of Medicine. Library. Historical Library Publication no. 15.)

Useful and well documented.

SEE ALSO abstract, review or bibliographic sections of *Acta anaesthesiologica; Acta anaesthesiologica belgica; Anaesthesia; Anesthesia and Analgesia*: section entitled "Current Index of Anesthesia and Analgesia," (cover title of journal, *Current Researches in Anesthesia and Analgesia*); *Anesthésie et analgésie; Anesthesiology; British Journal of Anaesthesia; Giornale italiano di anestesia e di analgesia; International Journal of Anesthesia; Revista Argentina de anestesia y analgesia; Schmerz, Narkose, Anaesthesie*

Biographies

483 *

American Society of Anesthesiologists. Directory of members. Chicago (188 West Randolph St.): The Society, 1952. 148p.

First issue 1942. Revised every few years. Includes some foreign anesthetists as well as American.

Histories

484

Bankoff, George. The conquest of pain: the story of anaesthesia. London: MacDonald, [1946]. 204p.

Brief, popular story.

485

Burroughs Wellcome & Co. Anaesthetics ancient [sic] and modern. London: Burroughs Wellcome, 1907. 65p.

Brief sketch.

486

Duncum, Barbara M. The development of inhalation anaesthesia, with special reference to the years 1846-1900. London: G. Cumberlege, Oxford Univ. Pr., 1947. 640p.

Excellent, illustrated study published for the Wellcome Historical Medical Museum. Footnotes, no bibliography.

487

Ellis, E. Severn. Ancient anodynes, primitive anaesthesia and allied conditions. London: Heinemann, 1946. 187p.

Brief but useful account from earliest times through mid-nineteenth century, with bibliography.

488

Keys, Thomas E. The history of surgical anesthesia. *New York: Schuman*, 1945. 191p.

A very useful work. With chronology, lengthy bibliography and illustrations.

489

Raper, H. Riley. Man against pain: the epic of anesthesia. New York: Prentice-Hall, 1945. 337p.

Popular illustrated account. Bibliographic appendix with lengthy discussions of 24 books.

490

Robinson, Victor. Victory over pain: a history of anesthesia. New York: Schuman, [1946]. 338p.

Popular story, chiefly concerning nineteenth and twentieth centuries. With bibliography. See also Flexner (no. 283), p. 293-352, an excellent account of the much-disputed ether discovery.

ANTHROPOLOGY

SEE ALSO Biology

Bibliographies, indexes, abstracts

SEE *Biological Abstracts* (no. 768) Section A; *Excerpta medica* (no. 90) Section I.

SEE abstract, review or bibliographic sections of *B.B.A.A., Boletín bibliográfico de antropología americana. Bulletin of the American Anthropological Association. Clearinghouse Bulletin of Research in Human Organization. Homo, internationale Zeitschrift für die vergleichende Biologie der Menschen*

Biographies

691

National Research Council. International directory of anthropologists. 3. ed. comp. by Melville J. Herskovits [and] Barbara Ames. Washington. The Council, 1950. 210p.

Prepared under the auspices of the Council's Division of Anthropology and Psychology Committee on International Relations in Anthropology and the American Anthropological Association. Listed by name with geographic index.

Histories

692

Casson, Stanley. The discovery of man; the story of the inquiry into human origins. London. Hamilton, [1939] 339p.

History of the study of anthropology

693

Haddon, Alfred C. History of anthropology. Rev. ed. London. Watts, [1934] 146p. (Thinker's library no. 42.)

Short sketch.

Directories

694

International directory of anthropological institutions; edited by William L. Thomas, Jr. and Anna M. Pikelis. New York. Wenner-Gren Foundation for Anthropological Research, 1953. 468p.

A handbook of world resources for research and education in anthropology. Contains descriptions of all institutions with interest in anthropology broadly defined. Arranged by geographical regions, preceded by international organizations. Indexes by names of institutions and by cities. Distributed by the American Anthropological Association.

ANTIBIOTICS

Bibliographies, indexes, abstracts

695

Lederle Laboratories Division, American Cyanamid Company. Aureomycin bibliography and index. 1951 ed. [New York]: Lederle, [1952] 319p.

The 3,102 entries are listed by author. Author and detailed subject indexes, p.105–319. Every organism and disease on which the drug has been tried are listed.

696 *

Waksman, Selman A. The literature on streptomycin, 1944–1952. [2. ed.] New Brunswick, N.J.: Rutgers Univ. Pr., 1952. 553p. (Rutgers University Institute of Microbiology Publications.)

Chronologic arrangement of 5,550 references with author and subject indexes.

SEE ALSO abstract, review, or bibliographic sections of *Antibiotiki* (Russian)

Histories

697

Bustinza Lachiondo, Florencio. De Pasteur a Fleming: los antibióticos antimicrobianos y la penicilina. 2. ed. Madrid: Editorial Plus-Ultra, [1945] 320p.

Sections on bacteria, molds; chemotherapy; antibiotics other than penicillin; and three sections on penicillin.

698

Epstein, Samuel, and Williams, Beryl. Miracles from microbes: the road to streptomycin. New Brunswick, N.J. Rutgers Univ. Pr. 1946. 155p.

Two chapters on the early development, and chapters on tyrothricin, penicillin, and streptomycin.

699

Sokoloff, Boris. The miracle drugs. Chicago: Ziff Davis Pub. Co., [1949] 308p.

Illustrated, readable, with bibliography. Chapters on Pasteur and Ehrlich, but chiefly about the sulfonamides and the antibiotics.

Encyclopedias, guides, handbooks

700

Florey, Sir Howard W., et al. Antibiotics; a survey of penicillin, streptomycin, and other antimicrobial substances from fungi, actinomycetes, bacteria, and plants. London: Oxford Univ. Pr. 1949. 2v.

Deals with the chemical and pharma-

cologic aspects of antibiotics exclusive of clinical use. An exhaustive survey of the history and laboratory investigations. Clinical applications to be covered in future volumes, of which Florey (no. 701) is one.

701 **
Florey Mary E. The clinical application of antibiotics penicillin. London Oxford Univ Pr 1952. 730p.
A companion volume to Florey *Antibiotics* (no. 700) and treats the clinical applications of penicillin exhaustively Still another volume dealing with the clinical uses of other antibiotics is in preparation.

702
Pharmaceutical Society of Great Britain. Antibiotics survey of their properties and uses. 2. ed. London Pharmaceutical Pr 1952. 290p.
Review articles, with bibliographies, covering history manufacture, clinical use, legal aspects, etc.

702.1
Waksman, Selman A., and Lechevalier Hubert A. Guide to the classification and identification of the actinomycetes and their antibiotics. Baltimore: Williams & Wilkins, 1953 246p.
Includes detailed classification scheme and *descriptions of species. Lists 108 antibiotics* with brief information on production, properties, toxicity, uses, and references to original articles also selected general references and indexes to species and to antibiotics.

Dictionaries

703 *
Karel, Leonard, and Roach, Elizabeth S. A dictionary of antibiosis. New York. Columbia Univ Pr 1951 373p.
Lists antibiotics, names of organisms inhibited, and those not affected. Toxicity and experimental clinical data are often given, *including surnames of investigators.* Extensive bibliography

APOTHECARIES

see Pharmacology and pharmacy

ART MEDICAL ILLUSTRATORS

Biographies

704
Association of Medical Illustrators. "Members of the Association, *Graphics* Richmond, Va., 1950, no. 1 p.10–64

Sketches give professional and personal data. In same issue are descriptions of some of the art departments in various medical schools of the United States.

ART MEDICINE AND THE FINE ARTS

705
Behne, Adolf. Läkaren i konsten en medicinsk bildatlas med beledsagande konsthistorisk Text. Oldenburg: Stalling, 1937 233p.
A collection of fine reproductions of medical illustrations, some in color Excellent for any historical library

706
Cabanès, Augustin. *Esculape chez les artistes.* Paris Le François, 1928. 401p.

707
Charcot, Jean, and Richer Paul M. L. P Les difformes et les malades dans l'art. Paris. Lecrosnier & Babé, 1889 162p.

708
Dumesnil, René. Histoire illustrée de la médecine. Paris Plon, [1950] 195p. (Éditions d'histoire et d'art. Collection ars et historia, publiée sous la direction de J et R. Wittmann.)
Valuable for illustrations rather than text.

709
Hollander Eugen. Die Karikatur und Satire in der Medizin. 2. Aufl. Stuttgart: Enke, 1921. 404p.

710
—— Die Medizin in der klassischen Malerei. 4 Aufl. Stuttgart: Enke, 1950. 488p.

711
—— Plastik und Medizin. Stuttgart: Enke, 1912. 576p.

712
Laignel-Lavastine, Maxime, ed. Histoire générale de la médecine, de la pharmacie, de l'art dentaire et de l'art vétérinaire. Paris Michel, [1936–49] 3
Articles by various authors. Valuable for illustrations—many in color—rather than for text. No index.

713
Richer Paul M. L. P L art et la médecine. Paris Gaultier Magnier [1902] 562p.

714
Veth, Cornelis. Der Arzt in der Karikatur Berlin. Stollberg, [1927] 153p.

ASTROLOGY

see Alchemy and astrology

ATOMIC ENERGY AND EFFECTS OF RADIATION

Bibliographies, indexes abstracts

714.1 *

Annual Review of Nuclear Science. Stanford Univ Calif., .1 1952+

Sponsored by the Committee on Nuclear Science of the National Research Council. Articles have good bibliographies and include subjects of biologic, physiologic, and medical significance.

715 * *

Nuclear Science Abstracts. Oak Ridge, Tenn., v 1 1948+

Lists declassified and unclassified reports. Abstracts of these and of periodical literature, arranged by subject. Summary of new nuclear data; list of AEC depository libraries. Author subject, nuclide, numerical, and foreign geographic indexes, cumulated annually through 4; next cumulation will cover 5–10. Published by the U.S. Atomic Energy Commission, Technical Information Division. A much less comprehensive bibliography with similar subject coverage is *Atomic Energy Significant References* issued by the Library of Congress, v 1 5, no. 7 1946–51

716

United Nations. Department of Security Council Affairs. Atomic Energy Section. An international bibliography on atomic energy Lake Success, N.Y Atomic Energy Commission Group, 1949–51 2v Supplements, no 1 1949–50+

V 1 deals with political, economic and social aspects 2, with scientific aspects Arranged by broad subject classification V 2 and its supplement contain 24,282 and 8,231 items respectively Much material of biologic and medical significance. A list is given of abbreviations used and of complete titles of journals cited.

717

U.S. Atomic Energy Commission. *Civil defense against atomic warfare;* selected reading list. A list of official reports of the U.S. Atomic Energy Commission and other Government agencies, together with significant book and periodical publications. Prepared for the National Security Resources Board by the United States Atomic Energy Commission. Washington: [Govt Print Off.] 1950. 24p.

Lists 410 scientific and technical publications useful as background information in planning civilian defense against atomic bombing Includes radiation detection and protection, biologic and medical effects of radiation, and effects of atomic bombings on Hiroshima and Nagasaki.

SEE ALSO abstract, review or bibliographic sections of *Atomic Scientists' Journal.*

Encyclopedias, guides, handbooks

718 * *

Behrens, Charles F ed. Atomic medicine. 2. ed. Baltimore: Williams & Wilkins, 1953. 632p.

Extensive revision of 1. ed., 1949 Chapters by many authorities cover all phases of tomic defense, radioactive isotopes, and radiologic safety Good bibliographies.

719 *

Siri, William E., *et al.* Isotopic tracers and nuclear radiations, with applications to biology and medicine. New York: McGraw-Hill, 1949. 653p.

Enlarged and revised from the U.S. Air Force, *Technical Report,* no. 5669 November 1947 A compilation of formulae, constants, diagrams of apparatus, and other data and descriptive material. Pt. 1–2 deal with isotopes and nuclear radiations, methods and instruments. Pt. 3, biologic and medical applications of isotopes. Bibliography arranged by isotope.

720

U.S. Los Alamos Scientific Laboratory Los Alamos, New Mexico. The effects of atomic weapons; prepared for and in cooperation with the U.S. Department of Defense and the U.S. Atomic Energy Commission. Washington Govt. Print. Off., [1950] 456p.

721

Voegtlin, Carl, and Hodge, Harold C., eds Pharmacology and toxicology of uranium compounds with section on the pharmacology and toxicology of fluorine and hydrogen fluoride. New York: McGraw-Hill, 1949–53. 4 (National Nuclear Energy Series. Manhattan Project. Technical Section, Division 6, v 1.)

Every aspect of the chemical and biologic effects of experimental poisoning by uranium and its compounds, also of fluorine. Exhaustive bibliographies.

Dictionaries

722

National Research Council. Conference on Glossary of Terms in Nuclear Science and Technology Glossary of nuclear energy

terms. Section VI: biophysics and radiobiology New York: American Society of Mechanical Engineers, [1950] 23+ xxp.

This is a "Preliminary edition, designated by the American Standards Association as a "Proposed American Standard. Chairman of the Review Committee for this Section. Edith H. Quimby About 300 terms defined.

AVIATION MEDICINE

Bibliographies indexes abstracts

SEE ALSO Altitude, pressure and decompression changes.

723 *

Hoff Ebbe C., and Fulton, John F A bibliography of aviation medicine. Springfield, Ill.: Thomas, 1942. 237p. (Yale University School of Medicine. Library Historical Library Publication no. 5)

Prepared for the Committee on Aviation Medicine, Division of Medical Sciences, National Research Council, acting for the Committee on Medical Research, U.S. Office of Scientific Research and Development. Includes early literature to 1943, 7,990 numbered entries arranged by classed subjects. List of 800 journals and handbooks consulted.

724 *

—— —— [Supplement] by Phebe Margaret Hoff, Ebbe Curtis Hoff and John Farquhar Fulton. [Springfield, Ill. Thomas] 1944 109p. (Yale University School of Medicine. Library Historical Library Publication no 9)

SEE ALSO *Terminology* (no. 131) Serie G

SEE ALSO abstract, review or bibliographic sections of *Journal of Aviation Medicine Luftfahrtmedizin Médecine aéronautique Revista médica de aeronáutica Rivista di medicina aeronautica.*

Encyclopedias, guides handbooks

725

Aero Medical Association. Committee on Aviation Toxicology. Aviation toxicology: an introduction to the subject and handbook of data. New York Blakiston, [1953] 120p.

Data furnished include time-concentration curves of toxicity carboxyhemoglobin in blood at high altitudes, and toxicity data for individual chemical compounds which are used or may be considered for use on air planes. Bibliographies. Committee chairman, William R. Stovall.

726

McFarland, Ross A. Human factors in air transportation; occupational health and safety New York: McGraw-Hill, 1953. 830p.

Timely International in scope, stresses disease control, psychologic factors, effects of high altitude, safety measures, and passenger care, including transportation of patients. Selected references.

727

U.S. Department of the Air Force. German aviation medicine, World War II; prepared under auspices of the Surgeon General, U.S. Air Force. Washington: Govt. Print. Off., [1950] 2v

Based on extensive investigations of German documents and research. Contributions by 56 specialists.

728

White, Clayton S., and Benson, Otis O eds. Physics and medicine of the upper atmosphere study of the aeropause. Albuquerque: Univ of New Mexico Pr 1952. 611p.

Intended for those concerned with planning, design, manufacture, and operation of aircraft. Bibliographies. Forms the proceedings of a Symposium on the Physics and Medicine of the Upper Atmosphere, sponsored in 1951 by the Air University School of Aviation Medicine.

BACTERIOLOGY MYCOLOGY PARASITOLOGY VIRUSES

SEE ALSO Public health, epidemiology hygiene, sanitation Technique; Tropical medicine Veterinary medicine; Zoology

Bibliographies, indexes abstracts

729

Abstracts of Bacteriology Baltimore, 1-9 1917-25

Published by the Society of American Bacteriologists. Includes proceedings of the Society Continued in *Biological Abstracts* (no. 768c)

730

Bulletin de l'Institut Pasteur Paris, v 1, 1903+

Classified abstracts and book reviews in bacteriology and microbiology Supplement covers literature for 1940-45 not available in France then. Issued monthly

731

Ginger Leonard O Windle, William F and Johnson, Jose E., eds. Bacterial pyrogens (particularly pyrogenic polysaccharides of bacterial origin); an annotated bibliography

Morton Grove, Ill.: Baxter Laboratories, 1952. 377p. Processed.

Covers period from 1785 to August, 1952. Arranged chronologically then by author

732

Helminthological Abstracts. Farnham Royal, Eng .1 1932+

Incorporating *Bibliography of Helminthology* Prepared by the Commonwealth Bureau of Agricultural Parasitology (Helminthology) Published by the Commonwealth Agricultural Bureaux. V 1–3 issued as supplement t the *Journal of Helminthology* Issued originally by the Institute of Agricultural Parasitology of the London School of Hygiene and Tropical Medicine. Arranged by title of journal indexed.

733

Jahresbericht über die Ergebnisse der Immunitätsforschung Stuttgart, .1–8, 1905–12.

Abstract journal arranged by author Superseded by *Ergebnisse der Hygiene* (no. 747)

734

Jahresbericht über die Fortschritte in der Lehre von den Gärungs-Organismen und Enzymen. Braunschweig, .1–22, 1890–1911. (Published 1891 1916.)

Edited by Alfred Koch. Abstracts literature on physiology of bacteria, fermentation, and the souring of milk. Arranged by subject. Bibliographic data often incomplete.

735

Jahresbericht über die Fortschritte in der Lehre on den pathogenen Mikroorganismen umfassend Bacterien, Pilze und Protozoen Braunschweig, 1 27 1885–1911

Edited by P Baumgarten. Includes theses Cumulative index to 1–10.

736

Pa American Sanitary Bureau. Bibliography of onchocercosis (includes selected studies to June 1945) Bibliografía de la oncocercosis (Incluye estudios seleccionados hasta Jun. 1945) Washington [The Bureau] 1950. 339p. (Its Publication no. 242.)

Over 1,500 references; annotations in English and Spanish.

737

Review of Applied Entomology London, 1 1913+

Published by the Commonwealth Institute of Entomology through June 1930 by the Imperial Bureau of Entomology Issued in two series Series A, Agricultural Series B, Medical and Veterinary Comprehensive abstract journal.

738

Review of Applied Mycology Kew [Eng.] .1 1922+

Comprehensive abstract journal. Issued monthly by Great Britain, Commonwealth Mycological Institute. More up to date than *Review of Medical and Veterinary Mycology* (no. 739) Covers such subjects as aerial dissemination, fungicides, and antibiotics with such thoroughness as to make it valuable for the medical mycologist, although taken up chiefly from the agricultural and botanic viewpoint.

739

Review of Medical and Veterinary Mycology Kew Eng .1 1943+

Abstract journal. V 1 no. 1–8, 1943–50, as *A annotated Bibliography (Medical Mycology* (one number year) 1943–46 issued by Imperial Mycological Institute, later by Commonwealth Mycological Institute. Semiannual, beginning 1951 V 1 still current in 1952.

740

Robinson, Radcliff P Phillips, Michael D and Negeben, Margaret G. A bibliography on "the effects of x ray on bacteria (1896— August, 1951) [Columbus, O.] Battelle Memorial Institute, 1951 17 leaves

Chronologic arrangement of 178 references.

741

U.S. Armed Forces Medical Library Reference Division. Gas gangrene and the gas gangrene organisms 1940–1952; an annotated bibliography of the Russian literature, 1940–1952, and the non-Russian literature for 1952. Comp. by Marjory C. Spencer with the assistance of Elizabeth Beyerly translator Washington [The Library] 1953. 73p. Processed.

Classified subject arrangement of 324 references.

742

U.S. National Institutes of Health. A bibliography of toxoplasmosis and *Toxoplasma gondii* comp. by Don E. Eyles and Jacob K. Frenkel. Washington Govt. Print. Off., [1952] 47p. (U.S. Public Health Service. Publication no. 247)

Unannotated author list of 920 references through 1951.

743

Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene. Abteilung I, Medizinisch-hygienische Bakteriologie, Virusforschung und Parasitologie. *Referate* Jena, .1, 1887+

V 1–30, 1887–1901 contain both *Originale* and *Referate* mingled together in one volume and are difficult to use as bibliographies. Beginning v 31, 1902, *Referate* issued separately. Includes literature on veterinary medicine. Especially valuable for foreign literature. V 1–93 1887–1929 spelled *Centralblatt*.
Suspended May 1945—Nov 1947 Title varies.

SEE ALSO *Biological Abstracts* (no. 768c); *Excerpta medica* (no. 90) Section IV *International Catalogue of Scientific Literature* (no. 6) Section R, Haswell and Dorr, *Index-Catalogue of medical and veterinary zoology* (no. 1957) *Japanese Journal of Medical Sciences* (no. 120F) *Sovetskoe meditsinskoe* (no. 130H) *Tsentral'nyi* (no. 131) Series G Y *ar Book of Pathology and Clinical Pathology* (no. 143K); *Zentralblatt für die gesamte Hygiene* (no. 1589)

Reviews

744 * *
Advances in Virus Research New York, 1 1953+
Critical review articles. Annual.

745 * *
Annual Review of Microbiology Stanford Univ Calif., 1 1947+
Good short reviews and bibliographies.

746 *
Bacteriological Reviews. Baltimore, v 1, 1937+
Published by the Society of American Bacteriologists. Good review articles with extensive bibliographies.

747
Ergebnisse der Hygiene, Bakteriologie, Immunitätsforschung und experimentellen Therapie. Berlin, 1 1914+
Continuation of *Jahresberichte* (no 733) Review journal with good bibliographies. Suspended 1944–48. V 1 as *Ergebnisse der Immunitätsforschung*

748
Nickerson, Walter J ed. Biology of pathogenic fungi. Waltham, Mass Chronica Botanica, 1947 236p. (Annales cryptogamici et phytopathologici, 6.)
Reviews.

749
Schmidt, Hans. Fortschritte der Serologie. Frankfurt-am-Main. Steinkopff, 1950+ 1
To be complete in 14 *Lieferungen* subsequently available only as a single, bound volume. Reviews with bibliographies.

Histories

750
Bulloch, William. The history of bacteriology London. Oxford Univ Pr 1938. 422p (Heath Clark lectures, University of London, 1936 [1937])
Excellent history with biographic notices of bacteriologists and lengthy bibliography

751
Ford, William W Bacteriology New York. Hoeber [1939] 207p. (Clio medica, no 22.)
With bibliography

752
Taylor Frank S. The conquest of bacteria from 606 to 693. 2. ed. London: Secker & Warburg, 1940. 144p.
Brief sketch with chapters on the rise of chemotherapy prontosil the sulphonamides pneumonia and M and B 693 further triumphs. Published in New York by the Philosophical Library and Alliance Book Corporation, 1942, with the title *The conquest of bacteria from salvarsan to sulphapyridine* 175p.

Encyclopedias, guides handbooks

753 * *
Bergey manual of determinative bacteriology By Robert S. Breed, E. G D Murray A. P Hitchens, [*et al.*] 6. ed. Baltimore: Williams & Wilkins, 1948. 1,529p.
Tabulated descriptions of 1,630 species of bacteria arranged by class. Brief notes on growth and reactions Bibliographic citations
P 1081–1291 contain 3 Supplements Order *Rickettsiales* Order *Virales* by F O. Holmes; III. Pleuropneumonia and pleuropneumonia-like organisms (*Borrelomycetaceae*) by Louis Dienes.

754
Buchanan, Robert E., and Fulmer Ellis I Physiology and biochemistry of bacteria Baltimore: Williams & Wilkins, 1928–30. 3
Exhaustive treatise. Fungi and molds included. Excellent bibliographies.

755
Doerr, Robert, and Hallauer Curt, eds. Handbuch der Virusforschung. Wien Springer, 1938–39 2v Supplements, 1944+
Contributions, some in English, by experts from various countries. Very comprehensive. Main work and first supplement are out of print. Second supplement, 1950, available. Will be kept up to date.

756

Great Britain. Medical Research Council. A system of bacteriology in relation to medicine. London: H. M. S. O., 1929–31. 9v

The most comprehensive work available in English; includes immunology and epidemiology but less detailed than Kolle and Wassermann (no. 758)

757

Holmes, Francis O. Handbook of phytopathogenic viruses. Minneapolis: Burgess Pub. Co., 1939. 221p.

Plant viruses arranged by classification. Convenient little handbook with bibliographies. See also Holmes' "Order *Virales*" p. 1,127–1,286 of *Bergey's manual* suppl. no. 2 (no. 753)

758

Kolle, Wilhelm, and Wassermann, A. von, eds. Handbuch der pathogenen Mikroorganismen ... 3. Aufl. mit Einschluss der Immunitätslehre und Epidemiologie sowie der mikrobiologischen Diagnostik und Technik ... Bearb. und hrsg. von W. Kolle, R. Kraus, [*et al.*] Jena: Fischer, 1927–31. 10v and index in 19v

Basic reference work. This and Great Britain's Medical Research Council system (no. 756) are the great authoritative source books for the bacteriologist, but has not been revised recently

759

Levaditi, Constantin, and Lépine, Pierre, *et al.* Les ultravirus des maladies humaines. 2. éd. Paris: Maloine, 1948. 2v

Comprehensive review. Good bibliography

760

Moss, Emma S., and McQuown, Albert L. Atlas of medical mycology. Baltimore: Williams & Wilkins, 1953. 245p.

A handbook for diagnosis of fungous diseases, presenting classification of fungi, concise descriptions of diseases, and explanation of methods of investigation. 245 excellent illustrations.

761

Prowazek, Stanislaus J. M. von, ed. Handbuch der pathogenen Protozoen. Leipzig: Barth, 1912–31. 3v

Appeared in *Lieferungen*. Very comprehensive. Excellent illustrations. Basic reference work

762

Van Rooyen, Clennel E., and Rhodes, Andrew J. Virus diseases of man. 2. ed. New York: Nelson, 1948. 1,202p.

Reference work for laboratory workers and clinicians.

Dictionaries

763

Ainsworth, Geoffrey C., and Bisby, Guy R. A dictionary of the fungi. 4. ed. Kew (Surrey): Commonwealth Mycological Institute, 1954. 475p.

Lists alphabetically generic names of fungi used through 1948. Much bibliographic data. Brief biographies of authorities. Systematic arrangement of genera and key to families in appendix. Contains much on medical mycology

764

Hauduroy, Paul, *et al.* Dictionnaire des bactéries pathogènes pour l'homme, les animaux et les plantes: suivi de la liste des êtres microscopiques conservés dans les collections de cultures types. 2. éd. Paris: Masson, 1953. 692+64p.

Bacteria are listed alphabetically, with synonyms, brief morphologic descriptions, culture methods, biochemical and biologic properties, and references to the original descriptions.

765

Partridge, William. Dictionary of bacteriological equivalents; French-English, German-English, Italian-English, Spanish-English. London: Baillière, Tindall & Cox, 1927. 140p.

In four sections by language. Useful aid for translation. Out of print.

BALNEOLOGY

see Therapeutics, physical.

BARBER SURGEONS

see Surgery

BIBLE, MEDICINE IN

see Religion and medicine.

BIOCHEMISTRY

see Chemistry and biochemistry

BIOLOGY

see also Botany; Agriculture; Zoology

Bibliographies, indexes, abstracts

This is in no sense a comprehensive bibliography for the subject. Other such works can be found in Winchell's *Guide* and comparable publications. Selection here has been based on the indirect application of these

tools to the medical sciences or on the fact that they offer general bibliographic works from which the medical scientist can select material of interest.

766

Année biologique; comptes rendus (annuels) des travaux de biologie générale. Paris, 1 1895+

Abstract journal. Beginning with 25 1920–21, published by the Fédération des Sociétés des Sciences Naturelles, and after 28, issued in two parts: I., Physiologie générale, and II. Morphologie et biologie générales. Useful for zoology.

767

Berichte über die wissenschaftliche Biologie. Berlin, v.1 1926+

Forms Abt. A of *Berichte über die gesamte Biologie*. Comprehensive abstract journal, especially good for foreign literature, German in particular. Abstracts appear promptly.

768

Biological Abstracts. Philadelphia, 1 1926+

Sponsored by the Union of American Biological Societies. Continues *Abstracts of Bacteriology* (no. 729) and *Botanical Abstracts* (no. 736). An outstanding source for supplementary literature of interest to medicine. Issued monthly since 1950; before that date nine issues annually. "Periodicals and serials covered" appears annually in May issue, 1945 to date. Previous list issued in 1941; symbols indicate for which titles authors' summaries are furnished; place of publication included, but no other information. Beginning January 1954 each issue has author index, cumulated in December issue. Beginning v. 13 1939 issued also in sections (which may be subscribed to separately). Subscribers to the sections receive the complete cumulated author and subject indexes for the comprehensive volume, which supply references to all subjects covered, in addition to the individual section subscribed to.

The sections are: a. Abstracts of General Biology, includes general biology, biography—history, bibliography, evolution, cytology, genetics, biometry, physical anthropology, and ecology. b. Abstracts of Basic Medical Science, includes animal physiology, nutrition, pharmacology, pathology, anatomy, embryology, and animal production. c. Abstracts of Microbiology, Immunology and Parasitology, includes immunology, bacteriology, viruses, parasitology, protozoology, and helminthology. d. Abstracts of Plant Sciences, includes phytopathology, plant physiology, plant anatomy, paleobotany, systematic botany, agronomy, horticulture, forestry, pharmacognosy, pharmaceutical botany, and ecology. e. Abstracts of Animal Sciences, includes paleozoology, parasitology, protozoology, helminthology, systematic zoology, and economic entomology. f. Abstracts of Animal Production and Veterinary Science, includes animal breeding, physiology, pathology, and anatomy of livestock; animal husbandry, dairy husbandry, poultry, ranch, fur and pet stock; veterinary science, veterinary parasitology and insect pests of animals; dairy bacteriology. Discontinued after 1953. g. Abstracts of Food and Nutrition Research, includes human and animal nutrition and metabolism, vitamins, diet and diet-deficiency diseases, food composition and values, food processing and food microbiology, beverages, storage and conservation of foods. Discontinued after 1953. h. Abstracts of Human Biology, includes human heredity, population, anatomy and embryology; child development, adolescence, growth, nutritional disorders, food habits and appetites, malnutrition, senescence; endocrine bases of personality and behavior; reproduction and sex; human ecology; race; health factors affecting population and human adaptation; and kindred topics. Discontinued after 1953. ("I" omitted in numbering.) j. Abstracts of Cereals and Cereal Products, includes the research literature on the cereal crops, agronomy, breeding, diseases, and insect pests; the storage, milling and processing, biochemistry and nutritional value, etc., of the grains of the milling industry and their products. Discontinued after 1953.

SEE ALSO *Bibliografia italiana* (no. 1), Section A. *See International Catalogue of Scientific Literature* (no. 6), Section L; *Japanese Journal of Medical Sciences* (no. 120C).

SEE ALSO abstract, review or bibliographic sections of *Human Biology*, *Journal of the Royal Microscopical Society*, *Protoplasma*, *Zeitschrift für wissenschaftliche Mikroskopie und für mikroskopische Technik*.

Reviews

769

Biological Reviews of the Cambridge Philosophical Society. Cambridge, Eng., 1 1923+

Review articles with good bibliographies. V. 1 as the Society *Proceedings: Biological Sciences*; 2–9 as *Biological Reviews and Biological Proceedings of the Cambridge Philosophical Society*. Cumulative index for every ten volumes.

770
Ergebnisse der Biologie. Berlin, 1–19 1926–43.
Review articles with excellent subject bibliographies. Index to 1–19.

771
Survey of Biological Progress. New York, 1 1949+
Reviews. Appears every two or three years.

Biographies

772
Hirsch, Gottwalt C., ed. Index biologorum investigatores, laboratoria, periodica. Berlin Springer 1928. 545p.
Pt. 1 lists biologists, with brief professional notes. Includes many names not found in usual medical sources. Pt. 2 lists laboratories and biologic institutions by subject, then by city: personnel given. Includes list of biologic journals. Out of print.

For biologists, SEE ALSO *Biological Abstracts* (no. 768a); Poggendorff (no. 29)

Histories

773
Dawes, Ben. A hundred years of biology London: Duckworth, [1952] 429p. (The hundred years series.)
Covers last hundred years. Chapters on protoplasm and cell reproduction; development; growth; heredity; taxonomy: functional problems; receptors and effectors; nervous system and coordination; behavior; evolution; parasites and parasitic diseases; antibiotics research institutes. With bibliography

774
Locy William A. Biology and its makers. 3. ed New York Holt, 1915. 477p
General survey including organic evolution.

775
— The growth of biology; zoology from Aristotle to Cuvier botany from Theophrastus to Hofmeister physiology from Harvey to Claude Bernard. New York. Holt, 1925 481p
Historical sketch.

776
Nordenskiold, Erik. The history of biology T by L. B Eyre. New York: Knopf, 1928 629p.
The most comprehensive history of the subject, with bibliography Pt. 3, p. [299] 616, on modern biology—nineteenth and twentieth centuries.

777
Rádl, Emanuel. The history of biological theories. Tr by E. J Hatfield. London: Milford, 1930. 408p.
Devoted to the nineteenth century

778
Singer Charles J. A history of biology; general introduction to the study of living things. Rev ed. New York: Schuman, [1950] 579p.
Earlier American edition has title: *The story of living things*. British edition: *A short history of biology* Not so comprehensive as Nordenskiöld. This edition differs from earlier one only in chapter on sex.

Encyclopedias, guides handbooks

779
Abderhalden, Emil, ed. Handbuch der biologischen Arbeitsmethoden. Berlin: Urban & Schwarzenberg, 1920–39. 13 pt. in 107v
Comprehensive and exhaustive work on biologic and biochemical methods, clinical diagnosis, and pathology. With bibliography Has general table of contents "Gesamtinhaltsübersicht, Stichwort und Mitarbeiter verzeichnis, 1939, 324p.

780
Tabulae biologicae. Amsterdam, v 1, 1925+
Biologic and physiologic data presented in tabular form and often from the statistical viewpoint. Some volumes constitute monographs in special field. Cumulative index for v 1–10.

Dictionaries

781
Artschwager Ernst. Dictionary of biological equivalents. German-English. Baltimore: Williams & Wilkins, 1930. 239p.
Useful as supplement to Lang (no. 571) Patterson (no. 896–97) De Vries (no. 69–70) and Partridge (no. 765) Has plates illustrating schematically the names in German of the various parts of flowers, plants, arthropods, worms, and birds.

782
Henderson, Isabella F and Henderson, W. D. A dictionary of scientific terms pronunciation, derivation, and definition of terms in biology botany zoology anatomy cytology genetics, embryology physiology 5 ed. by John H. Kenneth. London Oliver & Boyd, 1953. 506p.

783
Jaeger, Edmund C. A source-book of biological names and terms. 2. ed. Springfield, Ill.: Thomas, [1950] 287p.
A study of derivations from Latin and Greek. Good introduction on principles of word building, with examples.

784
Melander Axel L. Source book of biological terms. [New York]: College of the City of New York, Department of Biology 1937 157p.
Somewhat similar to Jaeger (no 783) but covers a different field. Suffixes, prefixes, and plurals are discussed. Biologic vocabulary p.63–157

785
Mello-Leitão, Candido de. Glossário biológico; pequeño dicionário de termos técnicos empregados em ciências biológicas. botânica, ecologia, genética, zoologia. Sã Paulo Companhia Editora Nacional, [1946] 646p.
Comprehensive with good definitions. Supplements Pinto (no 600)

786
Woodger Joseph H. Biology and language an introduction to the methodology of the biological sciences including medicine. Cambridge: Univ Pr., 1952. 364p (The Tarner lectures, 1949–50.)
W itten to improve the linguistic habits of scientists.

SEE ALSO Hough (no. 68) De Vries (no. 69–70) Leibiger (no. 72)

BIRTH CONTROL

Bibliographies Indexes abstracts

787
Himes, Norman E. A guide to birth control literature; selected bibliography on the technique of contraception and on the social aspects of birth control. London Douglas, 1931. 46p.
Sections on technique and social aspects, American and English literature continental literature, arranged by country

SEE ALSO abstract, review or bibliographic sections of *Fertility and Sterility Human Fertility*

Histories

788
Himes, Norman E. Medical history of contraception. Baltimore: Williams & Wilkins, 1936. 521p. (Medical aspects of human fertility series.)
Reference book, tracing complete development and present-day trends. Comprehensive bibliographies. Not a manual of practical methods. Sponsored by the National Committee on Maternal Health. See also Allen, Danforth and Doisy (no. 1000), Davis (no. 1269) Ploss and Bartels (no. 1271)

789
Robinson, Victor Pioneers of birth control in England and America. New York: Voluntary Parenthood League, 1919 107p.
Chapters on from Malthus to Mill Americas first contribution Bradlaugh's challenge; the Malthusian League the American propagandists progress in the professions; woman share Chronology of landmarks in birth control, 1798–1919

Directories

790
Planned Parenthood Federation of America. Directory of planned parenthood clinic services [New York]: The Federation, 1937+
Federation first as American Birth Control League, then as Birth Control Federation of America. Directory includes conception control services in the U S., Puerto Rico, and Canada also services for diagnosis and treatment of infertility in the U S. See also list in E. F Griffith, *A sex guide to h ppy marriage* 1952, p 319–37

BLOODLETTING

SF Phlebotomy

BOOKPLATES

Bibliographies Indexes abstracts

791
Radbill, Samuel X. Bibliography of medical ex libris literature. Los Angeles: Hilprand Pr 1951 40p
Brief discussion on bookplates, with bibliography and illustrations.

BOTANY AND AGRICULTURE

SEE ALSO Biology Food and nutrition; Science; Technique; Veterinary medicine Zoology

Bibliographies Indexes, abstracts

This is in no sense a comprehensive bibliography for these subjects. Other such works

can be found in Winchell's *Guide* and comparable publications. Selection here has been based on the indirect application of these tools to the medical sciences or on the fact that they offer general bibliographic works from which the medical scientist can select material of interest.

792

Agricultural Index. New York, 1 1916+

Cumulated annually and triennially Contains references chiefly to literature in English. Includes much veterinary medicine. Indexes U.S Department of Agriculture publications and experiment station bulletins from various states.

793

Art (L') Ancien, S.A. A catalogue of early herbals. Lugano: L Art Ancien, 1925. 61p.

Detailed annotations; introduction by A. C. Klebs. Other catalogs issued by this firm have helpful descriptions of early medical books. For supplement to this list, see A. C. Klebs' "Incunabula lists, herbals, *Bibliographical Society of America. Papers 11* (July–October 1917) 75–92; *12* (January–April, 1918) 41–57

794

Bibliography of Agriculture. Washington, v 1, 1942+ Processed.

Issued by the U.S. Department of Agriculture. The 1950 volume has 87,993 entries. Excellent index of indirect importance to medicine. Especially good for veterinary medicine, animal breeding, medical botany and nutrition. The department also issued list of journals currently received by the library through March, 1953 (no. 24)

795

Blake, S. F and Atwood, Alice C Geographical guide to floras of the world. An annotated list with special reference to useful plants and common plant names. Part I Africa, Australia, North America, South America, and Islands of the Atlantic, Pacific and Indian Oceans. Washington Govt. Print. Off., 1942. 336p (Agriculture Dept. Miscellaneous Publication no 401)

A good guide to sources of information on medicinal and poisonous plants. Part II, in preparation, ll cover Europe nd A ia.

796

Botanical Abstracts Baltimore, 1 15, 1918–26.

Arranged by subject. Cumulated author and subject indexes for 1 10, 1919–22 11 has its ow author and subject index 12–15 has no indexes. Continued in *Biological Abstracts* (no. 763)

797

Botanisches Zentralblatt. Cassel, 1–37 1880–1944/45.

Published weekly Abstracts, books, journals, dissertations, and agricultural reports. Includes material on plant diseases. Cumulative indexes.

798

Experiment Station Record. Washington, 1–95 1889–1946. (published 1890–1948) and General index for 1–70 1899–1934 (1903–37) 6

An abstract journal covering the international agricultural literature in books, periodicals, and government documents. Issued monthly by the U.S. Department of Agriculture, Office of Experiment Stations. Useful for botanic and veterinary material.

799

Haller Albrecht von. Bibliotheca botanica. London. C. Heydinger 1771–72. 2 Index emendatus. Berne: Benteli, 1908. 57p.

J C. Bay was responsible for the index.

800

Just's botanischer Jahresbericht. Berlin, v 1, 1873+

1873–82 as *Botanischer Jahresbericht*. Review journal. The best reference source for older work. Unfortunately late in appearing.

801

Meisel, Max. A bibliography of American natural history Brooklyn. Premier Pub. Co 1924–29. 3v

"The pioneer century 1769–1865; the role played by the scientific societies scientific journals; natural history museums and botanic gardens; state geological nd natural history surveys federal exploring expeditions in the rise and progress of American botany geology mineralogy paleontology and zoology An exhausti work with historical notes, contents, collations, and indexes.

802

Pritzel, Georg A. Thesaurus literaturae botanicae. [New ed.] Leipzig: Brockhaus, 1872. 576p.

Comprehensive bibliography with brief biographic notes and collations. Additional classified checklist. A reproduction of the 1871 edition was published by Gorlich, Milan, 1950.

SEE ALSO *Bibliografia italiana* (no. 1) Section D; *Biological Abstracts* (no. 763d); *Catalogue of Scientific Papers* (Royal Society) (no. 8) *International Catalogue of Scientific Literature* (no. 6) Section M.

SEE ALSO abstract, review or bibliographic

sections of *Zentralblatt für Bakteriologie Parasitenkunde und Infektionskrankheiten II Abt., Allgemeine landwirtschaftliche technische*

Reviews

803

Advances in Agronomy New York, v 1 1949+

Reviews with bibliographies. Published under auspices of American Society of Agronomy. Research on soil and its effect on animal and human nutrition chemical treatment of soil for nematode control; soil and its relation to malnutrition and disease.

804

Annual Review of Plant Physiology Stanford Univ Calif., 1 1950+

Reviews with bibliographies. Indirectly important to physiologists and nutritionists.

805

Fortschritte der Botanik. Berlin, 1 1931+

V 12 covers 1942–48. Review articles with bibliographies.

Biographies

806

Britten, James, and Boulger George S. A biographical index of deceased British and Irish botanists. 2. ed. rev by A. B. Rendle. London Taylor & Francis, 1931. 342p.

Comprehensive.

807

Kelly Howard A. Some American medical botanists Troy N.Y Southworth, 1914 215p.

Readable and informative sketches of American medical men whose names are now commemorated in botanic nomenclature.

808

Miall, Louis C. The early naturalists, their lives and work (1530–1789) London Macmillan, 1912. 396p.

A history of the development of knowledge concerning natural history as illustrated in biographies of men who made contributions to that knowledge.

809

Raven, Charles E. English naturalists from Neckham to Ray: a study of the making of the modern world. Cambridge Univ Pr 1947 379p.

A useful work with wider scope than title indicates since the naturalists of England travelled to the Continent and corresponded with scientists outside England. Ends with Sir Thomas Browne.

Histories

810

Arber Agnes R. Herbals, their origin and evolution. A chapter in the history of botany 1470–1670. New ed. Cambridge: Univ Pr 1938. 325p.

Excellent history with useful chronologic list of herbals, 1470–1670.

811

Blunt, Wilfrid. The art of botanical illustration. New York: Scribner 1951. 304p.

A general survey of the development of botanic illustration from the earliest days. A necessary volume to accompany any collection of herbals. With illustrations and bibliography

812

Fischer Hermann W K. Mittelalterliche Pflanzenkunde. München. Verlag der Münchner Drucke, 1929 326p.

Particularly useful for its table of synonyms and for its indexes of plant names.

813

Reed Howard S. A short history of the plant sciences. Waltham, Mass. Chronica Botanica, 1942. 320p. (A new series of plant science books, v.7)

Chapters on plant geography; morphology cytology; water economy of plants; fixation of carbon by plants assimilation of nitrogen fixation and metabolism of nitrogen plant nutrition mineral constituents in metabolism plant pathology

814

Rohde, Eleanor S. The old English herbals London Longmans, Green, 1922. 243p

Detailed descriptions of English herbals and those of the New World. Useful lists of manuscript and printed English herbals

Dictionaries

815

Artschwager Ernst, and Smiley Edwina M. Dictionary of botanical equivalents; French-English, German-English. Baltimore: Williams & Wilkins, 1925 137p.

Specialized terms not usually found in general dictionaries. Almost 90 per cent *German* terms, 10 per cent French.

816

Bedevian, Armenag K. Illustrated polyglottic dictionary of plant names in Latin, Arabic, Armenian, English, French, German, Italian

and Turkish languages, including economic, medicinal, poisonous and ornamental plants and common weeds. Cairo Argus & Papazian Presses, 1936. 2 pt. in 1v. 644+455p.

A useful list of agricultural and medicinal plants. Key word in Latin, followed by name in other languages. Pt. 2 indexes the common names of plants in each of the languages.

817

Entsiklopedicheskii slovar lekarstvennykh, efirnomaslichnykh i iadovitykh rastenii. Moskva Gosudarstvennoe Izdatel'stvo Sel'skokhoziaistvennoi Literatury 1951 486p.

An encyclopedic dictionary of medicinal, essential oil, and poisonous plants compiled by G. S. Ogolevets. Many illustrations, some in color Arranged under the Russian name; indexed by subject and by Latin name.

818

Jackson, Benjamin D. A glossary of botanic terms with their derivation and accent. 4 ed. New York: Hafner Pub. Co., 1950. 481p.

Over 25,000 terms. Appendixes explaining signs, abbreviations, and symbols bibliography

SEE ALSO De Vries (no. 69–70) Haltenhoff (no. 71)

BURNS

Bibliographies, indexes, abstracts

819

U.S. Armed Forces Medical Library Reference Division. Pathology and physiology of burns 1942–1951; an annotated bibliography comp. by Karl A. Baer Washington The Library 1952 107p. Processed.

Classified arrangement of 611 references.

CADUCEUS

SEE Symbolism, medical.

CANCER

Bibliographies, indexes abstracts

820

Cancer Current Literature. New York, 1–3, 1947–49 [2 ser.] 1 1950+

Published by the American Cancer Society The Society *Index to Current Periodical Literature on Neoplastic Diseases and List of Current Books* 1947–49 merged into this in 1950. Classified arrangement. Two-year cumulative author and subject indexes. Largely duplicates material in *Quarterly Cumulative Index Medicus* and *Current List of Medical Literature* but useful to individuals who lack access to those indexes.

821

Cancer Review: Journal of Abstracts. Bristol, Eng., 1–7 1926–32.

Under direction of the British Empire Cancer Campaign. Classified abstracts.

822

Donner Foundation. Index to the literature of experimental cancer research, 1900–1935 Philadelphia The Foundation, 1948. 1,057p.

Exhaustive bibliography

823

Index analyticus cancerologiae. Paris, 1 1927+

Published quarterly by the Ligue Française contre le Cancer. Continuation of *Revue analytique de travaux sur le cancer* which formed part of the *Bulletin de l'Association Française pour l'Étude du Cancer* from 1922 to 1927 Abstracts periodical literature only Titles are in original language, with French translation. Publication slow

824 ★

U.S. National Cancer Institute. A bibliography of the cytologic diagnosis of cancer Comp. by Erwin F Hoffman and Frederick G. Dhyse [et. al.] [Bethesda, Md.] The Institute, [1952] 114p. Processed.

Lists more than 1,000 references through 1951.

825 ★

— An index of tumor chemotherapy; tabulated compilation of data from the literature on clinical and experimental investigations, by Helen M. Dyer [Washington. Govt. Print. Off., 1950.] 329p. Processed.

Tabulations, subject index, and bibliography of 2,213 entries.

SEE ALSO *Excerpta medica* (no. 90) Section XVI *Zentralblatt für Bakteriologie Abt. I Referate* (no. 743)

SEE ALSO abstract, review or bibliographic sections of *Archivos cubanos de cancerologia* *Cancer* *Cancer Research* *Krebsarzt* *Zeitschrift für Krebsforschung*

Reviews

826

Advances in Cancer Research. New York, 1 1953+

Reviews with bibliographies.

Histories

827

Wolff Jacob. Die Lehre von der Krebskrankheit. Jena Fischer, 1907 28. 4v

Exhaustive, well-documented study

Encyclopedias guides handbooks

828

Barzilai, Gemma. Atlas of ovarian tumors. New York: Grune & Stratton, 1949 261p.

Systematic survey Primarily a diagnostic atlas 58 plates of microphotographs, some in color Based on collections of pathologic material in Vienna Women s Clinic, the Pathologic Institute of Vienna, the Pathologic Institute of Istanbul, and the Cancer Institute of Milan.

828.1

Homburger F eddy and Fishman, William H. The physiopathology of cancer A treatise for investigators, physicians, and students. New York: Hoeber-Harper [1953] 1,031p

Contributions from 28 uthorities, summarizing knowledge in active fields of cancer research. Bibliographies.

829 * *

U S. *Armed Forces Institute of Pathology* Atlas of tumor pathology Washington The Institute, fasc. 1–40 1949+

Prepared under the auspices of the National Research Council's Committee on Pathology Photographic illustrations with text.

830 * *

U.S. National Cancer Institute. Survey of compounds which have been tested for carcinogenic activity 2. ed by Jonathan L. Hartwell. [Washington. Govt. Print. Off] 1951 583p. (U.S. Public Health Service. Publication no. 149)

Information in tabulated form; index of compounds. Bibliography

831

Vincen Memorial Hospital, Boston. Vincent Memorial Laboratory The cytologic diagnosis of cancer Philadelphia Saunders, 1950. 229p.

A reference manual on the smear method. Includes photomicrographs of low and high power magnifications of cell types. With classified bibliography

Dictionaries

832 * *

American Cancer Society Statistics Committee. Manual of tumor nomenclature and coding. Corrected ed. New York: The Society 1951 [1953] 119p. Processed.

Arranged by class, with name first.

CARDIOVASCULAR SYSTEM

SEE Circulatory system and heart.

CARICATURES

SEE Art, medicine and the fine arts.

CHEMISTRY AND BIOCHEMISTRY

SEE ALSO Alchemy and astrology; Enzymology; Food and utrition Pharmacology and pharmacy· Technique.

Bibliographies Indexes, abstracts

Since the medical sciences are so deeply rooted in the field of chemistry It is necessary for the medical librarian to be familiar with the important chemical reference works and to have access to bibliographies and guides to the literature. The following treatises have proved useful for this purpose: American Chemical Society Division of Chemical Literature, *Searching the hemical literature* (no. 833), G. M. Dyson, *A hort guid to hemical literature* (no 839) M. G Mellon, *Chemical publications their nature and use* (no. 844) and B. A. Soule, *Library guide for the hemist* (no. 848) They give detailed descriptions of the contents, organization, and methods of using standard chemical publications.

This is in no sense comprehensive bibliography for these subjects. Other such works can be found in Winchell' *Guide* and comparable publications. Selection here has been based on the indirect application of these tools to the medical sciences or on the fact that they offer general bibliographic works from which the medical scientist can select material of interest.

833 *

American Chemical Society Division of Chemical Liter ture. Searching the chemical literature· collection of the papers presented at the Symposium held t the 117th national meeting in Detroit 1950 Washington The Society 1951 184p. (Advances in chemistry series, no. 4)

A valuable tool for the medical reference librarian Examples of the useful articles included are: "The use of *Chemical Abstracts* "Searching the German chemical literature, "Searching less familiar periodicals, "Searching medicinal chemical literature, and "Searching United States Government doc uments. Well indexed. Long bibliographies.

834

Bolton, Henry C. A select bibliography of chemistry 1493–1892. Washington Smithsonian Institution, 1893. 1,212p. Suppl 1492–

897 1899 489p. 2. suppl., 1492–1902. 1904. 62p. Academic dissertations. 1901 534p.

A comprehensive checklist in six sections: bibliography; dictionaries; history biography; chemistry pure and applied; alchemy; periodicals.

833

British Abstracts. London, 1926–53.

Published by the Bureau of Abstracts. Subtitle: Abstracts of all significant papers in pure and applied chemistry and biological subjects. 1926–44 as *British Chemical and Physiological Abstracts*. Chemical sections continue *British Chemical Abstracts* published by the Bureau of Chemical Abstracts representing the Chemical Society *et al.* Title has varied. 1924–25 as *Abstract of Chemical Papers*: Section A, in *Journal of the Chemical Society* 126 and 128, continuing its abstract section begun in 1847; Section B, published in *Journal of the Society of Chemical Industry* v 43 and 44, continuing its abstract section begun in 1882. Has good abstracts but not so comprehensive as some of the other abstract journals in field.

Sections for 1952–53 were: A.I. General, Physical, and Inorganic Chemistry. A.II. Organic Chemistry. A.III. Anatomy. Biochemistry. Experimental Biology. Experimental Medicine, Microbiology. Pathology. Pharmacology and Physiology. Continued in 1954 by *British Abstracts of Medical Sciences* (no. 87) 1 1937 as Biochemistry. In 1938 absorbed *Physiological Abstracts* (no. 1465). B.I. Chemical Engineering, Fuels, Metallurgy. Applied Electro-chemistry and Industrial Inorganic Chemistry. B.II. Industrial Organic Chemistry. B.III. Agriculture, Foods, Sanitation. C. Analysis and Apparatus.

The portions of *British Abstracts* which concern the medical sciences were replaced in January 1954 by the Abstracts" sections in journals issued by the Society of Chemical Industry as follows: B.I. and B.II by the *Journal of Applied Chemistry*; B.III. by the *Journal of the Science of Food and Agriculture*; A.III. by *British Abstracts of Medical Sciences* (no. 87) which covers anatomy, biochemistry, experimental biology, experimental medicine, microbiology, pathology, pharmacology and physiology.

834

British Chemical and Physiological Abstracts. London, 1926–44.

Continues *Abstracts of Chemical Papers*. Early volumes as *British Chemical Abstracts*. Published by the Bureau of Chemical Abstracts representing the Chemical Society *et al.* Issued in two sections: A., Pure chemistry and B., Applied chemistry. Numerical lists of patents abstracted. collective indexes, 1923–32, 1933–37. Continued in *British Abstracts* (no. 835)

837

Chemical Abstracts. Easton, Pa., v 1, 1907+

Continues *Review* (no. 846). Published by American Chemical Society. One of the best and most complete of the abstract journals. Indexes formulas and patents. annually. Cumulated decennial indexes. Includes physiology, pharmacology and nutrition as well as biologic chemistry. Entry under title instead of author is contrary to usual bibliographic procedure, and the fact that titles are not given as in original precludes accurate citation, a handicap in the use of this otherwise splendid tool.

Medicine and other subjects besides chemistry included. Latest "List of journals abstracted" in 45 1951 p.I–CCLV (also published separately). Previous editions appeared in the 1920, 1922, 1926, 1931 1936, 1942, and 1946 volumes. Symbols indicate libraries possessing the journals; and if films, photoprints and translations can be furnished. Much cataloging information, the standard abbreviation of the title, publisher' address, frequency and price. Lists 280 libraries reporting holdings in the U S Alaska, Canada, Hawaii, and Puerto Rico.

838

Chemisches Zentralblatt. Leipzig; Berlin, 1 1830+

1830–49 as *Pharmaceutisches Centralblatt* 1850–55 as *Chemisch-pharmaceutisches Centralblatt* 1856–1906 as *Chemisches Centralblatt*. 1948–49 published in two separate editions. Published by the Deutsche Chemische Gesellschaft. Very comprehensive, with excellent cumulated author subject, and formula indexes. Duplicates much material in *Chemical Abstracts* (no. 837) and *British Chemical* (no. 836) but covers foreign literature, especially German, little more extensively

839

Dyson, George M. A short guide to chemical literature. London Longmans, Green, 1951 144p.

Useful introduction to the literature of chemistry: methods of approach valuable for any subject. Tables indicating volumes and dates of some important chemical periodicals from 1800 to 1949

840

Ferguson, John. Bibliotheca chemica. Glasgow: Maclehose, 1906. 2v

Winchell enters this volume under James Young, owner of the collection described in this bibliography which furnishes copious notes, references, and collations.

841

Gaudenzi Nerio. Guida bibliografica internazionale per il chimico: libri e riviste. Firenze: Sansoni edizioni scientifiche, [1952] 509p.

A comprehensive listing of the important literature on pure and industrial chemistry including the basic general treatises recent books, especially those frequently revised periodicals whose names indicate their chemical character. Intends to give balanced representation to publications in Italian, French, English, and German. Excluded are works not available on the market. Classified arrangement with indexes for authors, subjects, periodical titles, and publishers. Introductory text and outline of arrangement given in all four languages. Subjects of medical interest include pharmaceutical and biologic chemistry bacteriology and enzymology.

842

Iodine Abstracts and Reviews. New York, 1 1949+

On the uses of iodine and its compounds. Prepared by the Chilean Iodine Educational Bureau (previously called Iodine Educational Bureau). Includes patent index.

843

Jahresbericht über die Fortschritte der Tier Chemie oder der physiologischen, pathologischen und Immuno-Chemie und der Pharmakologie. Wien and Wiesbaden, Jahrg. 1–49 1871–1919. General register for Jahrg 1 10, 11–20, 21–30, 31–40

Founded and edited by Richard Maly. Subtitle varies. Abstracts, arranged by subject with brief review. Important for older literature of physiologic and pathologic chemistry. List of the journals abstracted. Continued *Berichte Physiologie* (no. 1463)

844

Mellon, Melvin G. Chemical publications, their nature and use. 2. ed. New York, McGraw-Hill, 1940. 284p.

This excellent book discusses every type of chemical publication and should be available in medical libraries.

845

Periodica Chimica. Verzeichnis der im Chemischen Zentralblatt referierten Zeitschriften. 2. Aufl., bearb. von Maximilian Pflücke und Alice Hawelek. Berlin Akademie Verlag, 1952. 411p.

A list of the periodicals abstracted in *Chemisches Zentralblatt*. Published by the Deutsche Chemische Gesellschaft. Many medical and other scientific journals are included. Data on 5,000 journals, including 400 published in the U. S. S. R. Information includes titles, abbreviations, title changes, mergers, suspensions, publishers and addresses. Esthonian, Finnish, Japanese, Polish, Czech, Turkish, and Hungarian titles are followed by translation, usually German. The Russian, Ukrainian, Serbo-Croatian, and Bulgarian journals are in a second alphabet, arranged under the original title, followed by the transliterated title and a translation into German, French, or English.

846

Review of American Chemical Research. Easton, Pa., 1–12, 1895–1906

V 1–7 1895–1901 in *Technology Quarterly* v 8–14 v 1–2 also issued separately v 5–12, 1897 1906, in *Journal of the American Chemical Society* 19–28. V 1–7 contributed by the Massachusetts Institute of Technology instructing staff. Abstracts, rather than review articles. Includes federal and state documents as well as journals. Superseded by *Chemical Abstracts* (no. 837)

847

Society of Public Analysts and other Analytical Chemists. Bibliography of standard tentative and recommended or recognized methods of analysis, comp. under the authority of the Analytical Methods Committee by the Standards Methods Subcommittee. Cambridge, Eng. Heffer [1951] 225p.

The tabulated bibliographies refer only to British and American authorities. They are arranged by subject. By many contributors, dates of compilation vary

848

Soule, Byron A. Library guide for the chemist. New York McGraw-Hill, 1938. 302p. (International chemical series)

Guide to the use of chemical literature and reference works. Supplements other works of this type.

849

University of Cincinnati. College of Medicine. Kettering Laboratory. Classified bibliography of publications concerning fluorine and its compounds in relation to man, animals, and their environment, including effects on plants. Prepared by Irene R. Campbell with the assistance of Marjorie R. Christian and Evelyn Widner. Cincinnati [The Laboratory 1950+] 2 and Supplements, 1951+ Mimeographed. Loose-leaf.

In two parts: Pt. 1 Inorganic fluorine com-

pounds Pt. II, Organic fluorine compounds. Each part in a classified arrangement with the literature under each subject divided into that published through 1947 and that after 1947

850

Vadrea, Francesco Aminoacidi, 1920–1949 Torino: I.T.E.R. [Industrie Tipografico-Edit. Riunite], 1952. 274p.

A bibliography of amino acids sponsored by the Centro Studi Aminoacidi of the Istituto di Patologia Generale of the Università di Torino.

851

Zentralblatt für Biochemie und Biophysik. Leipzig, v 1–23, 1902–21

V 1 3 as *Biochemisches Centralblatt* 4–9 as *Centralblatt für die gesamt Biologie I. Abt., Biochemisches Centralblatt*. In v 10, *Centralblatt für die gesamte Biologie II. Abt., Biophysikalisches Centralblatt* joined with this. Classified abstract journal. Includes some physiology and pharmacology Continued in *Berichte Physiologie* (no. 1463)

SEE ALSO *Bibliografia italiana* (no. 1) Section A; Durem (no. 618) *Excerpta medica* (no. 90) Section II *International Catalogue of Scientific Literature* (no. 6) Section D; *Japanese Journal of Medical Sciences* (no. 1208)

SEE ALSO abstract, review or bibliographic sections of *Analyst Journal of Histochemistry and Cytochemistry*; *Kolloid-Zeitschrift Mikrochemie*

Reviews

852

Advances in Carbohydrate Chemistry New York, 1 1945+

Reviews with bibliographies.

853

Advances in Colloid Science. New York, 1 1942+

Reviews with bibliographies.

854

Advances in Protein Chemistry New York, 1 1944+

Reviews with bibliographies.

855

Annual Reports on the Progress of Chemistry London, 1, 1904+

Issued by the Chemical Society Good review with lengthy bibliographies.

856

Annual Review of Biochemistry Stanford Univ Calif., 1 1932+

Reviews with bibliographies. Cumulated index, 1–10.

857

Annual Review of Physical Chemistry Stanford Univ Calif., v 1 1950+

Reviews with bibliographies; of importance to medical libraries because of radiation chemistry, isotopes, and other phases of physical chemistry on which medical applications are based.

858

Boit, Hans G. Fortschritte der Alkaloidchemie seit 1933. Berlin: Akademie-Verlag, 1950. 425p. (*Scientia Chimica*, *Bd.* 2.)

Covers the literature through 1949 Supplements R. Seka, Alkaloide, in Abderhalden's *Handbuch der biologischen Arbeitsmethoden* Abt. I, Teil 11 1933, p.1,069–1,424.

859

Chemical Reviews. Baltimore, v.1 1924+

Published by the American Chemical Society Provides reviews and comprehensive summaries of recent research in theoretical chemistry Lengthy bibliographies. No indexes i individual volumes. Author nd subject index for 1–10 in 10: for 11–20 in 20. Index volumes 1–40 in v 40.

860

Fortschritte der Chemie organischer Naturstoffe. Progress in the chemistry of organic natural products. Progrès dans la chimie des substances organiques naturelles. Wien, v 1 1938+

Review articles with extensive bibliographies.

861

Haurowitz, Felix. Progress in biochemistry a report on biochemical problems and on biochemical research since 1939. Basel Karger 1950.

This continues *Fortschritte der Biochemie* 1. ed., 1924 2. ed., 1931; 3. ed., 1938; 4 ed 1948. Reviews developments, 1939–49 preface dated Jan., 1949 Good bibliographies.

862

Progress in Biophysics and Biophysical Chemistry New York, 1 1950+

Reviews with bibliographies.

863

Progress in Organic Chemistry New York, 1 1952+

Reviews ith bibliographies

864

Quarterly Reviews. London, 1, 1947+

Published by the Chemical Society Re-

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Mellon, Melvin G. Chemical publications, their nature and use. 2 ed. New York McGraw Hill, 1940 284p

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846

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V 1–7 1895–1901 in *Technology Quarterly* v 8–14 v 1 2 also issued separately 3–12, 1897–1906, in *Journal of the American Chemical Society* 19–28 V 1–7 contributed by the Massachusetts Institute of Technology instructing staff Abstracts, rather than review articles. Includes federal and state documents as well as journals. Superseded by *Chemical Abstracts* (no. 837)

847

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1 two parts Pt. 1, Inorganic fluorine com-

876

Biochemical Preparations. New York, v.1 1949+

Each volume discusses different groups of compounds. Preparation, properties, and purity of product are given. Carefully documented.

877

Bourne, Geoffrey H., and Kidder, George W., eds. Biochemistry and physiology of nutrition. New York, Academic Pr., 1953+ 2v

The most salient developments in nutrition research, for research workers dealing with metabolism, as well as for nutritionists. V. 1 covers history, metabolism, amino acids, biosynthesis of proteins, and vitamins. V. 2, in preparation, will include enzymes, the microbiology of digestion, iron, calcium, and phosphorus metabolism and trace elements. Bibliography.

878

Deuel, Harry. The lipids: their chemistry and biochemistry. New York: Interscience Publishers, 1951+ 2v

Exhaustive study, well documented. V. 2 in preparation.

879

Flaschenträger, Bonifacius. Physiologische Chemie; ein Lehr- und Handbuch für Ärzte, Biologen und Chemiker hervorgegangen aus dem Lehrbuch der physiologischen Chemie von Olof Hammarsten. Hrsg. von Bonifacius Flaschenträger [*et al.*] Berlin: Springer, 1951+ 2

Comprehensive, modern work on physiologic chemistry.

880

Fromherz, Hans, and King, Alexander. Englische und deutsche chemische Fachausdrücke: ein Leitfaden der Chemie in englischer und deutscher Sprache. 2. Aufl. London: Murby, 1952. Leipzig: Verlag Chemie, 1952. 361p.

Practical handbook of chemical procedure and apparatus, rather than a dictionary. Descriptions given both in English and in German. Useful for translating. The definitions are exact.

881

Glick, David. Techniques of histo- and cytochemistry: a manual of morphological and quantitative micromethods for inorganic, organic, and enzyme constituents in biological materials. New York: Interscience Publishers, 1949. 531p.

Handbook of laboratory methods. Bibliography.

882

Hoppe-Seyler/Thierfelder. Handbuch der physiologisch- und pathologisch-chemischen Analyse für Ärzte, Biologen, und Chemiker. 10. Aufl. hrsg. von Konrad Lang und Emil Lehnartz unter Mitarbeit von Günther Siebert. Berlin: Springer, 1953+ 5v in (?)

This 10. edition is greatly expanded over the single volume 9. edition of 1924. It promises to be an exhaustive treatise on the chemical analyses of the body, its organs, fluids, and excretions in health and disease.

883

Kruyt, Hugo R., ed. Colloid science. New York: Elsevier Pub. Co., 1949–52. 2v

All aspects covered. Does not give systematic treatment of properties of particular substances or systems. Translated by L. C. Jackson.

884

Neurath, Hans, and Bailey, Kenneth, eds. The proteins: chemistry, biological activity and methods. New York: Academic Pr., 1953+ 2v in 4.

A comprehensive treatise.

885

Oppenheimer, Carl, ed. Handbuch der Biochemie des Menschen und der Tiere. 2. Aufl. Jena: Fischer, 1923–27. 9v. Ergänzungsband, 1930. 528p. Ergänzungswerk, 1933–36. 3v in 4.

An important work. Not quite so comprehensive as Abderhalden's *Handlexikon* (no. 875). Written from the physiologic angle. The last supplement volume contains extensive studies in metabolism. The *Ergänzungswerk* volumes supplement specific volumes of the main work. Bibliographies particularly important. Still in print.

886 **

Peters, John P., and Van Slyke, Donald D. Quantitative clinical chemistry. 2. ed. Baltimore: Williams & Wilkins, 1932–46. 2v

First published in 1931 and reprinted in 1932 with certain corrections and changes. Invaluable for biochemists and physicians. Bibliographies. V. 1, 1,041p., "Interpretations," covers metabolism; v. 2, "Methods," never revised and available only in the first edition, 1932.

887

Standard methods of clinical chemistry. New York, v. 1 1953+

Published by the American Association of Clinical Chemists. Issued irregularly in small volumes to facilitate future revision. An attempt to summarize the methods of clinical chemistry. V. 1 deals with the important,

most-used methods. The grouping of certain methods by volumes will make available separately those on specific subjects.

Dictionaries

English

888

Bennett, Harry Concise chemical and technical dictionary Brooklyn Chemical Pub. Co., 1947 1,055p.

Good, though not so comprehensive as Hackh (no. 890) Formerly *Standard chemical and technical dictionary*

889

Condensed chemical dictionary; a reference volume for all requiring quick access to essential data regarding chemicals and other substances used in manufacturing and research and to terms in general use in chemistry and the process industries; Francis M. Turner editorial director 4 ed. by Arthur and Elizabeth Rose. New York Reinhold, 1950. 726p.

More a concise encyclopedia of information on chemicals, drugs, raw materials, and brand or trade name products than a dictionary Has particularly extensive listings of trade name products. Includes specifications for commercial products, fire and poison hazards, and shipping regulations.

890 ★

Hackh, Ingo W D Chemical dictionary American and British usage, containing the words generally used in chemistry and many of the terms used in the related sciences of physics, astrophysics, based on recent chemical literature. 3. ed. by J. Hun Grant; re base, with changes and additions. Philadelphia. Blakiston, [1946] 925p.

One of the most useful and comprehensive of the chemical dictionaries.

891

Malisoff William M., ed. Dictionary of biochemistry and related subjects. New York Philosophical Library [1943] 579p.

Definitions and some discussions of almost encyclopedic length.

892

Miall, Stephen, and Miall, L. M., eds. A new dictionary of chemistry ed. with the assistance of many well-known chemists. 2. ed. London Longmans, 1949 589p.

Concise in form. Not nearly so comprehensive as Hackh (no. 890) but has more detailed descriptions of chemical compounds.

893

Thorpe, Sir Thomas E., ed. Thorpe dictionary of applied chemistry 4 ed by Jocelyn Field Thorpe and M. A. Whiteley London Longmans, [1937+] v 1+ Index v 1-6 in v.6.

Very comprehensive. Encyclopedic descriptions. More useful to pharmaceutical institutions than to the general medical library Ten volumes published so far

SEE ALSO Heilbron (this *Handbook* p 865)

Other languages

894

Mayer Albert W Chemical technical dictionary (German English-French-Russian) Tr under the direction of B. M. Menshutkin and M. A. Bloch. Brooklyn, N Y Chemical Pub. Co 1942 872p.

Especial attention given to idiomatic expressions common to various industries. Variations in form of chemical nomenclature are included.

895

Molina Font, Julio. Diccionario químico y farmacéutico. Español-inglés, inglés-español. México, D.F Editorial de Libros Científicos, [1949] 468p.

Spanish text, with Spanish and English terms in one alphabet.

896

Patterson, Austin M. A French-English dictionary for chemists. 2. ed. New York: Wiley 1954 476p

A welcome aid in translation. No descriptions or chemical formulas.

897

—— A German English dictionary for chemists. 2. ed. New York. Wiley [1950] 541p.

Good dictionary N descriptions or formulas.

898

Rompp Hermann. Chemie-Lexikon. 3. Aufl. Stuttgart: Franckh, 1952 53. 2v 2,150p.

Includes the important concepts, procedures, products, and achievements of modern chemistry

CHEMOTHERAPY

See Therapeutics.

CHILD WELFARE

SEE Pediatrics and child welfare.

CHOLERA

Histories

899

Chambers, John S. The conquest of cholera, America's greatest scourge. New York: Macmillan, 1938 366p.

Detailed history of cholera in America, with bibliography. Covers chiefly the period from 1832 through 1873, with brief chapter concerning epidemics in more recent years.

900

Sticker, Georg. Abhandlungen aus der Seuchengeschichte. Bd. 2. Die Cholera. Giessen Töpelmann, 1912. 592p.

Historical introduction, endemic cholera infantile cholera; Indian cholera. Detailed and comprehensive. N index, but detailed table of contents and bibliography

CHRONIC ILLNESS

Bibliographies, indexes, abstracts

901

U.S. Public Health Service. Chronic illness; digests of selected references by Violet B. Turner [Washington, 1951] 216p. (U.S. Public Health Service. Public health bibliography series, no. 1) (U.S. Public Health Service. Publication no. 10.)

Prepared by the Division on Public Health Methods. Covers decade preceding publication; subject arrangement. No foreign literature included. List of agencies and institutions arranged by state.

Directories

902 *

New York Academy of Medicine. Committee on Public Health Relations. Directory of convalescent homes in the United States. 6. ed. White Plains, N.Y. Burke Foundation, 1947 112p.

Lists 164 low-cost institutions with more than ten beds, including those for cardiac and tuberculosis patients. Arranged by state. Homes for aged omitted.

CIRCULATORY SYSTEM AND HEART

Bibliographies, indexes, abstracts

903

Koller, Ernest K., and Katz, Jacob, eds. A bibliography of the world literature on blood pressure, 1920–1950. [Boston] Commonwealth of Massachusetts, [1952] 3v. Processed.

Prepared on a cooperative basis by the Massachusetts State Legislature Recess Commission on Hypertension and by Columbia University School of Public Health and its Bureau of Applied Social Research. A comprehensive bibliography of 17,000 books, reports, and journal articles in 20 languages. A companion volume to *A symposium on essential hypertension: an epidemiologic approach* (Boston, 1951) 373p., sponsored by the Commonwealth of Massachusetts. An alphabetic list of references with selected abstracts.

SEE ALSO *Anesthesia Abstracts* (no. 681); *Biological Abstracts* (no. 768b); *Traité de médecine* (no. 519) X–XI.

SEE ALSO abstract, review or bibliographic sections of *Acta cardiologica*, *American Heart Journal*, *Archives des maladies du coeur et des vaisseaux*, *British Heart Journal*, *Circulation*, *Circulation Research*, *Minerva medica*, *Revista española de cardiologia*, *Zeitschrift für Kreislaufforschung*

Reviews

904

Ergebnisse der Kreislaufforschung. Dresden, v.1–5, 1931–35

Review articles with good bibliographies.

Histories

905

Garrison, Fielding H. An outline of the history of the circulatory system, *Bulletin of the New York Academy of Medicine* 2. ser. 7 (October 1931) 781–806.

Brief but useful.

906

Herrick, James B. A short history of cardiology. Springfield, Ill. Thomas, [1942] 258p.

Chronologic history with emphasis on the nineteenth century. With references.

907

Rolleston, Sir Humphry D. Cardio-vascular diseases since Harvey's discovery. Cambridge: Univ. Pr. 1928. 149p.

Chapters on anatomic observation, unaided clinical observation, examination of patients with aid of instruments of precision, physiologic and pathologic experiment. Bibliography.

908

Willius, Frederick A., and Dry, Thomas J. A history of the heart and the circulation. Philadelphia: Saunders, [1948] 456p.

In three parts: chronologic sketch through 1925; biographies; chronology by subject of men who made contributions. Long reference lists. Illustrated.

909
Willius, Frederick A., and Keys, Thomas E., eds. Cardiac classics. St. Louis: Mosby 1941 858p.
Very useful work with translated extracts from outstanding contributions, biographies of authors and list of references.

Encyclopedias guides handbooks

910
Abbott, Maude E. Atlas of congenital cardiac disease. New York American Heart Association, 1936 [reprinted 1954] 62p.
Contains line drawings, photographs, reproductions of x rays and electrocardiograms and other types of illustration depicting the development and comparativ anatomy of the heart as well as congenital heart diseases. Citations to literature on cases given here are in. Donald deF Bauer and Effie C. Astbury "Congenital cardiac disease, *Amer Heart J* 27 (1944) 688–729

911 ★★
Friedberg, Charles K. Diseases of the heart. Philadelphia Saunders, 1949 1,081p.
A comprehensive survey with good bibliographies.

912 ★★
Gould, Sylvester E., ed. Pathology of the heart. Springfield, Ill Thomas, [1953] 1,023p.
Comprehensive, authoritative, well illustrated work with extensive bibliographies.

913 ★
Lepeschkin, Eugene. Modern electrocardiography Baltimore: Williams & Wilkins, 1951+ 2v
A comprehensive survey of progress since 1933, with bibliography of 9,911 items.

914
New York Heart Association. Criteria Committee. Nomenclature and criteria for diagnosis of the heart and blood vessels. 5 ed. New York The Association, 1953. 359p.
Gives preferred terminology with interpretative explanation. Includes not only changes in the heart and adjacent related structures, *but also disturbances of function.* Code numbers from the *Standard nomenclature of diseases* issued by the American Medical Association, are supplied whenever they exist.

915
Robb, George P An atlas of angiocardiography; prepared for the American Registry of Pathology Armed Forces Institute of Pathology [Washington] America Registry of Pathology National Research Council, 1951 141p.
Revision of earlier classes 157 figures.

916 ★
Taussig, Helen B. Congenital malformations of the heart. New York: Commonwealth Fund, 1947 [1948] 618p.
Text, with colored plates and black-and-white figures. Bibliographies.

CLASSIFICATION OF DISEASES

Encyclopedias guides handbooks

917 ★
National Conference on Nomenclature of Disease. Standard nomenclature of diseases and operations. Ed. by Richard J Plunkett and Adaline C. Hayden. New York. Blakiston, 1952. 1,034p.
Standard basis for hospital records, including terminology for case histories and for causes of death. Arranged as topographic and etiologic classification. Sponsored by the American Medical Association. Revised frequently

918 ★
World Health Organization. Manual of the international statistical classification of diseases, injuries, and causes of death. 6th revision of the International lists of diseases and causes of death. Adopted 1948. Geneva. World Health Organization, 1948–49 2v and Addendum, 1 1953+ (*Bulletin of the World Health Organization* Suppl. 1 and 6+)
Replaces *Manual of the international list of cause of death*. In this revision single list is provided for morbidity and mortality: includes International rules for application of the classification. V 1 is the "tabular" or classified list, 2, the index.

CLINICAL AND INTERNAL MEDICINE

For modern works, see Medicine.

Histories

919
Faber Knud H Nosography; the evolution of clinical medicine in modern times. 2 ed. New York Hoeber 1930. 222p.
First edition has title: *Nosography in modern internal medicine* Chapters on Sydenham, the Paris school, German physiologic

medicine, the bacteriologic clinic, functional diagnosis, and constitutional pathology

920

Rolleston, Sir Humphry D Internal medicine. New York: Hoeber 1930. 92p. (Clio medica, no. 4)

COLD AND COLD INJURY

Bibliographies, indexes, abstracts

921

U.S. Library of Congress. Science Division. Cold, immersion and frostbite [a bibliography] Washington, 1951 104p.

A preliminary classified listing, not annotated, not vailable for general distribution. Revised final list in preparation.

CYTOLOGY

see Anatomy histology embryology

DENTISTRY

Bibliographies, ind xes, abstracts

922

Bagnall, J Stanley Bibliography on caries research Ottaw N tional Research Council of Canada, 1950. 557p. Processed.

Prepared for nd issued by the Council' Associate Committee on Dental Research. Summaries of the literature arranged by broad subjects bibliographic references

923

Bebb, W lliam. A bibliography of dental journals published in the United States and Canada, *Journal) k National Dental As sociation* 6 (1919) 255–64.

Lists 140 titles, with more or less full genealogies.

924

Campbell, J Menzies. A dental bibliography: British and American, 1682–1880. London David Low 1949 63p.

Aims at completeness. Contains entries for 723 books and pamphlets, the earliest British one, 1682, the earliest American one, 1801. Chronologic arrangement. No annotations; omits paging and publisher

925

D.D.S. Digest of Dental Science. New York, 1 2, 1952 53.

About 30 articles abstracted per issue. A erage length, one page. Illustrations re produced.

926

Dental abstracts. New York, [Ser 1] Dec. 1941—Nov 24 1944 [Ser 2] 1–6, 1945–1950. Ser 1 and Ser 2, v 1–2, processed.

Beginning Feb. 1947, becomes official publication of the Columbia U l ersity School of Dental and Oral Surgery. Good abstracts. Some foreign literature included.

927

Fortschritte der Zahnheilkunde nebst Literaturarchiv Leipzig, 1–9 1925–33.

Monthly Reproduces illustrations. The best of the dental abstract journals for its period.

928

Index to Dental Literature in the English Language. Buffalo and Chicago, 1839+ (published 1911+)

Through 1938 compiled by Arthur D Black, as *Index to the Periodical Dental Literature* Published by the Dental Index Bureau, American Institute of Dental Teachers, American Dental Association, *et al* A classified index. Publication, begun in 1921 was not carried out in chronologic order First two olumes cover 1839–75 and 1876–85 thereafter through 1947 each volume covers three to five year periods. 1948–49 in one volume. Beginning 1950 issued quarterly in cumulative form, the fourth cumulation being the annual bound volume (which may be purchased separately at reduced price) Since 1939, easy to use in present dictionary arrangement but lacks foreign la guage literature.

A more detailed description for the earlier period of this index can be found i Inez Bowler *A elementary manual of dental library practice* (Ann Arbor Univ of Michigan Pr 1932) Charlotte E. Coffma also gives a very practical nd helpful explanation of the index and directions for its use in "Periodical indices containing dental as well as medical items, *Bull. med. Libr Ass.*, 24 (Dec., 1935) 105–08. Alice M. McCann also discusses these new developments in "The Dental Index—one hundred years; its future, *Bull. med Libr Ass.*, 29 (March, 1941), 163–67 The *Index* includes several special bibliographic articles. "Bibliographiae stomatologicae" by Andrés G. Weber (1916–20 olume, pxiv–liii) is comprehensive chronologic list, with descripti notes, of dental bibliographies, beginning with the medical works of odontologic interest published in the sixteenth century A bibliography of dental society proceedings, transactions and publications by Edward C. Mills is i the 1927 29 olume, pxiii–xlviii. Part I, first

of state, district, county and city dental societies, arranged by states; Part II, a list of the publications of national dental societies in English-speaking countries and of international dental congresses published in English. Gives brief historical notes about each organization and record of its publications. "The editorial influence upon dental literature, 1839–1890" by L. Pierce Anthony in the 1891–95 volume, p.xxv–xlvi, comprises biographies and usually portraits of editors of early American dental journals. "The history of dental periodical literature in the English language from 1839 to 1875" by William H. Trueman in the 1839–75 volume, p.xxv–lv, gives a brief historical survey of 48 American journals, listed chronologically with full notes and reproductions of some title pages. The "History of the dental periodical literature of the British Empire" by William H. Trueman is in the 1876–85 volume, p.xxiv–xlvii. This has been reprinted with title page incorrectly reading "1843–1885." Includes a brief historical survey of 28 British journals, with full notes and reproductions of some title pages.

929

Index der deutschen und ausländischen zahnärztlichen Literatur und zahnärztliche Bibliographie. 1847/1902–1934. Berlin, 1914–36.

Issued under the auspices of the Zentral-Verein Deutscher Zahnärzte (later the Deutsche Gesellschaft für Zahn-, Mund- und Kieferheilkunde). Edited by Gottlieb Port and Karl R. Hesse. Classified arrangement. Covers dental, medical, chemical, biologic and pharmaceutical journals, chiefly foreign, with German predominating. Continued in *Zentralblatt* (no. 936)

930

National Research Council. A survey of the literature of dental caries. Prepared for the Food and Nutrition Board, National Research Council, under the supervision of the Committee on Dental Health ... by Guttorm Toverud, S. B. Finn, G. J. Cox, C. F. Bodecker and J. H. Shaw. Washington: National Academy of Sciences—National Research Council, 1952. 567p. (National Research Council. Publication 225.)

Comprehensive review articles. Bibliography.

931

Poletti, Gian B. De re dentaria apud veteres. Editio altera auctior et emendatior revisa ... a Lamberto Diotallevi. Milano: Gàrlich, 1951. 13p.

Through 1900. Arranged by author with occasional extensive notes. Contains some general works on medicine and surgery which have chapters on the subject. With a bibliography of dental bibliographies.

932

Roth, Harry, ed. "Nutrition and oral conditions: bibliography and abstracts of the literature from 1939–1951." *Jour. dent. Med.*, 8 (September 1953), special issue, 62p.

Editor assisted by the Society for Dental Research of the New York University College of Dentistry. Classified list of 146 references by deficiency conditions, then by author. Abstracts given for 27 additional articles.

933

Taft, Jonathan. Index to the periodical literature of dental science and art, as presented in the English language. Philadelphia: Blakiston, 1886. 212p.

Contains: chronologic bibliography of dental periodicals; a subject index to the periodical literature but without author and title of articles; and an author index. Covers the period from 1839 to 1885, and includes some journals not indexed in *Index to Dental Periodicals* (no. 928)

934

U.S. Public Health Service. Division of Industrial Hygiene. Industrial dental care: bibliography. Washington: The Service, 1950. 14 leaves. Processed.

List of 108 readily available references, 1914–49, in reversed chronologic order.

935

Weinberger, Bernhard W. Dental bibliography ... reference index to the literature of dental science ... in the libraries of the New York Academy of Medicine and Bernhard Wolf Weinberger. 2. ed. [New York]: First District Dental Society [1929]. 183p. Part II. A subject index ... with additional reference index. 1932. 261p.

Part I contains checklist by author ... section devoted to periodicals, transactions of congresses, etc., arranged by country and a list of early medical classics containing dental sections. Part II contains additions to Part I, a chronologic list of dental books, 1530–1810, and the subject index.

936

Zentralblatt für die gesamte Zahn-, Mund- und Kieferheilkunde. Leipzig, v.1–10, 1936–45.

Continues the *Index der deutschen* (no. 929). Issued under the auspices of the Deutsche Gesellschaft für Zahn-, Mund- und Kieferheilkunde. A classified abstract journal, with occasional review articles and ... compre-

hensive bibliography. Beginning in 1948 issued as supplement to: *Deutsche Zahn-Mund- und Kieferheilkunde*

SEE ALSO *Anesthesia Abstracts* (no. 681) *Biological Abstracts* (no. 768); *Chemical Abstracts* (no. 837); *Current List / Medical Literature* (no. 103); *Japanese Journal / Medical Sciences* (no. 120 I) *Quarterly Cumulative Index Medicus* (no. 99); Smith (no. 1403) *Sovetskoe meditsinskoe* (no. 130L) *Tsentral'nyi* (no. 131) Serlia V

SEE ALSO abstract, review or bibliographi sections of *Journal of the American Dental Association Boletin dental Argentino, Deutsch Zahn- Mund- und Kieferheilkunde Deutsch zahnärztliche Zeitschrift Journal / Oral Surgery Journal / Periodontology Oral Surgery Oral Medicine and Oral Pathology Revue d stomatologie Rivista italiana di stomatologia Stomatologia Stomatologia italiana.*

Reviews

937

Year Book of Dentistry. Chicago, 1936+

Illustrated review with bibliographies. Issued by the publishers of the [*Year Book of*] *Practical Medicine* (no. 143)

Biographies

I addition to the works cited below biographic information may often be found in the directories of many state dental associations, generally published annually in the organ of the association or separately

938

America Dental Association. America dental directory Chicago, 1947+

Arranged by state and city with name index and geographic list of dental specialists. Lists societies, international organizations, dental schools, and schools for dental assistants, hygienists, and technicians Includes Alaska, Hawaii, Puerto Rico, and Canal Zone, armed forces, public health, and veterans services. History of American Dental Association and requirements of state dental examining boards. An indispensable source of information concerning dentists, dental education, and practice. Triennial revision through 1953, thereafter expected to become annual.

939

Canadian Dental Association. Directory June 1 1952. [Toronto]: The Association, [1952] 105p.

A list of members, with date of graduation, arranged by province.

940

Dentists register printed and published under the direction of the Dental Board of the United Kingdom in pursuance of the Dentists Act, 1878 (Section 11); comprising the names and addresses of dental practitioners registered (1) in the United Kingdom list, (2) in the colonial list, and (3) in the foreign list. London The Dental Board, 1879+

An annual alphabetic list of all dentists eligible to practice under the laws of Great Britain. Includes officers of the Dental Board. Gives certificate number, address, date of registration, and qualifications (degrees, etc.) Various acts relating to dentistry are included, as well as notices concerning its practice.

941

Orthodontic Directory of the World. Nashville, .1, 1920+

V 1-2 entitled *Orthodontic Directory / America.* United States arranged by states, then Canada by provinces, followed by other countries. Lists of orthodontic societies and schools. Editors' address 1915 Broadway Nashville, Tenn. Latest issue, 16. ed., 1952, 226p edited by Oren A. Oliver and William H Oliver

942

Polk's Dental Register and Directory of the United States and Dominion of Canada. Chicago, 1, 1893+

Arranged by state. State laws and a list of dental colleges nd societies included. Index buried among advertisements. Latest issue is 14. ed 1928, 1 195p.

943

Who's who in dentistry; biographical sketches of prominent dentists in the United States and Canada. Ed. by Samuel Greif. New York: Who' Who Dental Pub. Co 1916-25. 2v

Date of birth, professional data, and bibliographies. At back of 2 is list of those who died since the publication of 1

For dentists, SEE ALSO Gies (no. 962) *I d to Dental Literature* (no. 928); Thorpe in annotation to Koch (no. 948)

SEE ALSO the general reference works under directories of medical schools, *Index generalis Minerva Jahrbuch* and *World / Learning* (p. 404) in which many references to dentists will be found.

Histories

944

Colyer Sir J Frank. Old instruments used for extracting teeth. London Staples Pr 1952. 245p.

Illustrated account. With bibliography

945

Dalton, Van Broadus. The genesis of dental education in the United States. Cincinnati: [The Author] 1946. 216p.

With chapter on the first dental societies dental legislation and the Ohio College of Dental Surgery

946

Guerini, Vincenzo. A history of dentistry Philadelphia. Lea & Febiger 1909 355p.

Illustrated history through the eighteenth century Useful despite the fact that information discovered since its publication has shown some of the material to be erroneous.

947

Journal of the American Dental Association, 40, no. 6, June, 1950. Mid-century issue, p 643–86

Advances, 1901–50, in dental science, education, and licensure in social responsibility in dental literature. Notable contributors. With bibliographies.

948

Koch, Charles R E. History of dental surgery Fort Wayne N tional Art Pub. Co., 1910 3

The most detailed and comprehensive history Includes chapters on dental literature, journalism, education, legislation, societies, and jurisprudence. V 3 B. L. Thorpe, Biographies of pioneer American dentists and their successors The sketches of the earliest men are unsatisfactory since the work of B. W Weinberger (no. 954) has uncovered contemporary documents which clear up many misconceptions concerning the lives of these men.

949

Lindsay Lilian A short history of dentistry London J Bale, Sons and Danielsson, 1933. 88p. (Short history series.)

950

Lufkin, Arthur W A history of dentistry 2. ed. Philadelphia Lea & Febiger 1948. 367p.

Brief survey which does not entirely supersede Taylor This edition add chapters on dental caries oral surgery; orthodontics (by F M. Casto); operative dentistry prosthesis the control of pain (historical sketch of anesthesia by W Harry Archer) With illustrations, references.

951

Prinz, Hermann. Dental chronology record of the more important events in the evolution of dentistry Philadelphia: Lea & Febiger [1945] 189p.

Appendix contains lists of dental journals in English; dental schools in the United States and Canada, etc., and brief chronologies of general and local anesthesia and of instruments for extraction.

952

Sudhoff, Karl F J Geschichte der Zahnheilkunde. 2. Aufl. Leipzig: Barth, 1926. 222p.

Excellent short history

953

Taylor James A. History of dentistry Philadelphia: Lea & Febiger 1922. 238p.

Short history containing some material not covered in other brief surveys.

954

Weinberger Bernhard W An introduction to the history of dentistry with medical and dental chronology and bibliographic data. St. Louis Mosby 1948. 2v

V 1 is general survey V 2 is entitled. An introduction to the history of dentistry in America; Washington's need for medical and dental care" V 2 particularly valuable, with much material gathered by the author from previously untapped sources. Illustrated.

955

—— Orthodontics an historical review St. Louis Mosby 1926. 2

Comprehensive survey

SEE ALSO Laignel-Lavastine (no 712)

Encyclopedias, guides, handbooks

956

American Association of Dental Editors. A manual for dental editors. 2. ed. [Chicago] The Association, 1953. 48p.

A convenient handbook. Obtainable from Dr L. Franklin Bumgardner 6-H Doctors Building, Charlotte 7 N C.

957

American Dental Association. Bureau of Economic Research and Statistics. Distribution of dentists in the United States by state, region, district and county Chicago: The Association, [1953] 62p. Processed.

Intended to provide "leads for the dentist seeking a location. Variety of useful statistics presented in the table for each state.

958 *

—— Council on Dental Therapeutics. Accepted dental remedies, containing a list of

official drugs selected to promote a rational dental materia medica and descriptions of acceptable non-official articles. Chicago, 1934+

939

Archer William H. Manual of dental anesthesia; an illustrated guide for student and practitioner Philadelphia: Saunders, 1952 192p.

Useful work for reference.

940

Bernier Joseph L., and Ash, James E. Atlas of dental and oral pathology; prepared at the Army Institute of Pathology from material in the Registry of Dental and Oral Pathology of the American Dental Association. 4. ed. Washington: Registry Pr 1948. 230p.

Complete revision of earlier editions; 484 illustrations from photographs.

941 * *

Black, Greene V A work on operative dentistry with which his Special dental pathology is combined. 8. ed. rev by Robert E. Blackwell. Woodstock, Ill., Medico-Dental Pub. Co., 1947–48. 4v

One of the most comprehensive systems of dentistry in the English language; profusely illustrated. V 4 includes a glossary for the four volumes.

942

Gies, William J. Dental education in the United States and Canada; report to the Carnegie Foundation for the Advancement of Teaching. New York: The Foundation, 1926. 692p. (Carnegie Foundation for the Advancement of Teaching. Bulletin no. 19)

Much useful information about dentistry dental education, and dentists. Part 6 describes dental schools in detail, is arranged by state, and includes the number of dentists in each state and the statutory requirements for the practice of dentistry

943

Gordon, Samuel M., ed. Dental science and dental art. Philadelphia Lea & Febiger 1938. 731p.

A concise handbook by specialists giving encyclopedic information on theory and practice. Includes material on physiology pathology therapy and statistics. Although old, still useful

944

Grossman, Louis I., *et al.* Lippincott' handbook of dental practice. 2. ed. Philadelphia: Lippincott, [1952] 503p.

Concise, well illustrated. Useful subject arrangement.

945

Kantorowicz, Alfred, ed. Handwörterbuch der gesamten Zahnheilkunde. Leipzig Barth, 1929–31. 4v

Comprehensive encyclopedia; well illustrated.

946

La pratique stomatologique, sous la direction du Dr Chompret [*et al.*] Paris: Masson, 1948–52. 9v

Comprehensive illustrated treatise. All volumes can be ordered separately I. Pathologie buccale, péri buccale et d'origine buccale, par L. Rousseau-Decelle et J Rasson, 3. éd., 1948, 546p., II Pathologie dentaire, par J Bercher [*et al.*], 3. éd 1950, 550p., III. Technique chirurgicale stomatologique, par A. E. J Chompret [*et al.*], 3. éd., 1951 365p. IV Dentisterie opératoire, par P Nespoulous et G. Carlier 2. éd., 1953; V Prothèse dentaire amovible ou adjointe, par H. Guilly [*et al.*] 3. éd., 1951 760p., VI. La prothèse dentaire conjointe, par Béhard, 2. éd., 1949, 1 193p., VII. Orthodontie, par G Izard, 3. éd., 1950, 1,330p.; VIII. Restauration et prothèse maxillo-faciales, par Ponroy et Psaume, 2 éd., 1950, 535p.; IX. Radiographie bucco-dentaire et agents physiques en stomatologie, par P Bertrand [*et al.*] 2. éd., 1950, 523p.

947 *

Thoma, Kurt H. Oral surgery 2. ed. St. Louis: Mosby 1952. 2v

Comprehensive text, lavishly illustrated. Includes theory and practice.

948

Die Zahn–, Mund– und Kieferheilkunde; hrsg von Karl Häupl, Wilhelm Meyer und Karl Schuchardt. München: Urban & Schwarzenberg, 1953+ 5v and index.

An exhaustive treatise on diseases of the teeth, mouth, and jaws, splendidly illustrated. Issued in *Lieferungen* not sold separately

SEE ALSO U.S. Naval Medical School (no. 1369)

Directories

949

American Association of Dental "Membership, *American Association* Dental Schools Proceedings 3 (1935)+

A geographic list by state, including Canada. Gives only name, address, and dean institution. The history of these schools will be found in *Falk's Dental Register* 1938 (no. 942)

SEE ALSO histories of schools and lists of so-

dteties in American Dental Association, *American dental directory* (no. 938)

Dictionaries

SEE ALSO Medicine—Dictionaries.

English

970

Dunning, William B., and Davenport, S. E., Jr A dictionary of dental science and art, comprising the words and phrases proper to dental literature, with their pronunciation and derivation. Philadelphia Blakiston, [1936] 635p.

Excellent technical dictionary

Other languages

971

Greve, Hans C. Zahnärztlich-klinisches Wörterbuch. 2. Aufl. Berlin. Berlinische Verlagsanstalt, 1949 173p.

Terminology not so comprehensive as Holzapfel (no. 972) Has brief list of English terms.

972

Holzapfel, A. Dental Lexicon. Dental products and related matters in German, Englisch [*sic*] French and Spanish. Mainz Medizinische Verlagsanstalt, 1939 640p.

A polyglot dictionary in four alphabets, one for each language. Not very comprehensive. Out of print.

973

Marie, Joseph S. F English-Spanish, Spanish-English dental vocabulary including many medical terms. Lancaster Pa. Jaques Cattell Pr [1943] 159p.

Useful word book. N definitions.

974

Müller-Stade, Ernst. Zahnärztliches Lexikon die Fachausdrücke der Zahnheilkunde und ihrer Hilfswissenschaften. 8. Aufl. Leipzig Barth, 1947 184p.

Dictionary in German including many medical terms.

975

Scarterzini, Carmelino. Dicionário odontológico [contendo têrmos de medicina, farmácia, diagnósticos, formulas, produtos químicos e farmacêuticos, etc.] São Paulo Edições e Publicações Brasil, 1945. 436p.

Portuguese dictionary of approximately 12,000 dental, pharmaceutical, and medical terms pertinent to dentistry

976

Terra, Paul de. Manual of conversation for the dental profession. collection of professional terms and phrases in German, English, French and Italian. 2. ed. Stuttgart: Enke, 1922. 274p.

Title and text in all four languages. Pt. I, terms commonly used, Pt. II expressions and conversation concerning dentistry and patients. Index for each language. Still useful.

DERMATOLOGY

SEE Skin and venereal diseases.

DIABETES

Bibliographies Indexes, abstracts

977

Diabetes Abstracts. Cincinnati, v 1–10, 1942–51 Processed.

Published quarterly for the American Diabetes Association by the Lilly Research Laboratories. After 1951 included in *Diabetes.*

SEE ALSO abstract, review or bibliographic sections of *Diabetes.*

Histories

978

Papaspyros, Nick S. The history of diabetes mellitus. London. [Stockwell], 1952. 100p.

Brief sketch with lengthy bibliography

DIAGNOSIS

SEE ALSO Laboratories Technique.

Encyclopedias guides handbooks

979

Aguste-Lafont, Edouard. Le laboratoire: notions générales de chimie, biologie, bactériologie, cytologie, sérologie; instruments, détails de techniques interprétations des résultats. Paris Vigot, 1952. 2v

Illustrated and comprehensive, including many tests not usually found in laboratory handbooks. Applications to general medicine, the specialties, surgery and industrial medicine Excellent index.

980 * *

French, Herbert, and Douthwaite, Arthur H., eds. An index of differential diagnosis of main symptoms by various writers. 7 ed. Bristol Wright, 1954. 1,046p.

An encyclopedia of symptoms, correlated as well as indexed.

981 * *

Gradwohl, Rutherford B. H. Clinical laboratory methods and diagnosis, a textbook on

laboratory procedures with their interpretation. 4. ed. St. Louis: Mosby 1948. 3v

The most comprehensive of such works. Other less extensive works of the same type are: Kolmer *Clinical diagnosis* 2. ed., 1949; Todd, Sanford, and Wells, *Clinical diagnosis* 12. ed., 1953 and Miller *Clinical pathology* 4. ed., 1952; all useful.

982

Merck manual of diagnosis and therapy source of ready reference for the physician. 8. ed. Rahway N J: Merck, 1950 1,592p.

Convenient, compact reference book for the practitioner

DRUGS

see Pharmacology and pharmacy

ECONOMICS MEDICAL

sa also Public health, epidemiology hygiene, sanitation Social medicine, Social welfare.

Bibliographies, indexes, abstracts

983

American Medical Association. Bureau of Medical Economic Research. An annotated bibliography of group practice, 1927–1950. Chicago: The Association, 1951 71p. (Its Bulletin no. 85 revised edition of Bulletin no. 63.)

Arrangement of 317 references by year author index.

Encyclopedias guides handbooks

984 *

American Medical Association. Bureau of Medical Economic Research. Medical service areas: population, square miles and primary centers [in the United States] Comp. by Frank G. Dickinson and Charles E. Bradley Chicago The Association, 1951 48p and map. (Its Bulletin no. 80.) Suppl. 1951 28p

Tables giving inventory of physicians by area and location of medical service centers Study planned as an aid to the survey of medical economics and health care in the United States.

985

U S. Public Health Service. Division of Public Health Methods. Medical group practice in the United States: summary of recent published material and supplementary unpublished data on fees and volume of work, by G. Halsey Hunt and Marcus S. Goldstein Washington. The Service, 1951 70p. (Public Health Service Publication no. 77)

Facts and statistics in concise arrangement with good tables and figures.

986

U.S. Social Security Administration. Division of Research and Statistics. Independent plans providing medical care and hospitalization insurance in 1949 in the United States. 1950 survey by Agnes W Brewster Washington Supt. of Documents, 1952. 122p. (U.S Social Security Administration. Bureau Memorandum no. 72.) Processed.

Thorough survey with tables, showing distribution by state.

987 * *

Winslow Charles E. A. The cost of sickness and the price of health. Geneva: World Health Organization, 1951 106p. (World Health Organization. Monograph Series no. 7)

A general presentation of the economic value of preventive medicine. Includes useful statistics and references.

Directories

988 *

American Medical Association. Council on Medical Service. Voluntary prepayment medical care plans. Rev ed Chicago: The Association, 1950. 137p.

Arranged by state; full information given. Name table and standards of acceptance included.

989

Blue Cross guide: a summary of group enrollment benefits, rates and regulations of non-profit Blue Cross hospital service plans. Rev Chicago American Hospital Association, 425 N Michigan A e., 1952. 141p.

Published annually by the Blue Cross Commission of the Association. Arranged by state. Available from the Association or any local "Blue Cross Pla

990

Klem, Margaret C. Prepayment medical care organizations. 3. ed. Washington, 1945 149p. (U.S. Social Security Board. Bureau of Research and Statistics Memorandum no. 55)

Arranged by state. Full information given. Also statistics and summary of findings Continued to some extent in Bureau Memorandum no. 72, U.S. Social Security Administration (no. 986)

991

U.S. Public Health Service. Division of Public Health Methods. Medical groups in the

that they offer general bibliographic works from which the medical scientist can select material of interest.

1012

"Bibliografia vitaminologica, 1944–1946+ *Acta vitaminologica*. Milano, [1947]+

1013

Chaikoff I. L., Entenman, C., and Zilversmit, D Absorption of fat in various nutritional and environmental states bibliography and review of the literature. Chicago Quartermaster Food and Container Institute for the Armed Forces, 1947 251p.

The 596 references arranged by detailed subjects critical annotations.

1014

Chilean Iodine Educational Bureau. Iodine content of foods annotated bibliography 1825–1951 With review and tables. London The Bureau, 1952. 183p.

Annotated chronologic list of 326 papers on 1,207 food items. Index of foods, author index, and classification of foods by country of origin.

1015

Chilean Nitrate Educational Bureau. Bibliography of the literature on the minor elements and their relation to plant and animal nutrition. 4. ed. New York. The Bureau, 1948. 1+

Abstracts arranged by element. Translated titles for foreign entries make it impossible to cite them directly. Journals are cited by abbreviation only some not easily identifiable. An author index, element index, and general nutrition and botanical index. V 3 issued 1953.

1016

Fanning, Robert J Pacific Islands nutrition bibliography Honolulu University of Hawaii Pr 1951 70p.

Contains 207 annotated references on food problems and needs in the Pacific Islands, 1784 through June, 1950. Compiled at the recommendation of the Seventh Pacific Science Congress, 1949

1017

Food Science Abstracts. London, 1 1929+

V 1–20, 1929–1948, as *Index to the Literature of Food Investigation*. Published by Great Britain, Food Investigation Board. While primarily for food industry, many abstracts are important for research in food, nutrition and public health.

1018

Harris, Philip L., and Kujawski, Wilma F Annotated bibliography of vitamin E, 1940 to 1950. Rochester N Y.: Eastman Kodak Company 1951 184p. V.2, 1950–1951. 1952 106p.

The 1,562 entries are arranged by broad subject. Distributed free to libraries through the National Vitamin Foundation, 150 Broadway New York 7 N Y

1019

Leong, P C. Nutrition bibliography of Malaya. Honolulu: University of Hawaii Pr 1952. 23p.

Contains 72 annotated references covering the literature through June, 1951 Compiled at the recommendation of the Seventh Pacific Science Congress, 1949

1020 * *

Nutrition Abstracts and Reviews. Aberdeen, 1 1931+

Published by the Commonwealth Bureau of Animal Nutrition, the Medical Research Council, and the Reid Library, Aberdeen. A comprehensive abstract journal. Covers literature promptly Includes chemistry of foods, physiology of nutrition, diet in health and disease, vitamins, deficiency diseases, and the feeding of animals. Book reviews.

1021

Vélez Boza, Fermín. Bibliografía venezolana sobre alimentación y nutrición. Caracas Bolívar 1950. 155p. (Seri de Publicaciones del Instituto Nacional de Nutrición, no. 3.)

Contains 670 references to Venezuelan literature on nutrition, and list of journals. Many short résumés included.

SEE ALSO *Advances in Agronomy* (no. 803), *Biological Abstracts* (no. 768b, g, h, and j) Merck & Co. (no 1401) *Traité de médecine* (no. 519) IX.

SEE ALSO abstract, review or bibliographic sections of *American Journal of Digestive Diseases and Nutrition Archives des maladies de l'appareil digestif et des maladies de la nutrition Ernährung Internationale Zeitschrift für Vitaminforschung Journal of the American Dietetic Association Journal of Clinical Nutrition Vitamine und Hormone Zeitschrift für das gesamte Ernährungswesen Zeitschrift für Untersuchung der Lebensmittel Zeitschrift für Vitamin- Hormon- und Fermentforschung*

Reviews

1022

Advances in Food Research. New York, 1 1948+

Good reviews with bibliographies.

1023
Ergebnisse der Vitamin- und Hormonforschung. Leipzig, v.1–2, 1938–1939.
Review of progress. Contributions are from various countries and in various languages. Lengthy bibliographies. Continued in *Vitamine und Hormone.*

1024
Nutrition Reviews. New York, 1 1942+
Published by the Nutrition Foundation. Cumulative index to 1–5 and 6–10. Author index and detailed subject index, but no index to the bibliographic citations.

1025 * *
Vitamins and Hormones: Advances in Research and Application. New York, 1 1943+
Good reviews with extensive bibliographies. Published annually 1938–39 covered by *Ergebnisse der Vitamin- und Hormonforschung* now discontinued.

Biographies

1026
[Biographical sketches.] In: *Journal of Nutrition* v 40, 1950+
Short sketches, with portraits, of workers in nutrition, appearing in first issue of each volume.

Histories

1027
Cummings, Richard O. The American and his food, a history of food habits in the United States. Chicago Univ of Chicago Pr [1940] 267p.
With chapters on health by rail (1841–80); the fight against germs (1881–1916) the concept of "scientific eating" (1881–1916); unequal degrees of protection (1917–29) depression and nutrition (1929–39) education and food costs (1929–39) federal feeding programs (1935–40)

1028
Drummond, Jack C., and Wilbraham, Anne The Englishman's food a history of five centuries of English diet. London Cape, [1939] 574p.
Detailed history

1029
Filby Frederick A. A history of food adulteration and analysis. London: Allen & Unwin, [1934] 269p (History of science library)
Chapters on grocers, bakers, brewers, vintners, distillers, and the beginnings of organic analysis. With bibliography

1030
Hintze, Kurt. Geographie und Geschichte der Ernährung. Leipzig: Thieme, 1934 330p.
Arranged chronologically by locality or race: Egyptian, Babylonian, Hebrew Greek, Roman, European, Northern, Asian, African, American, Australian. Bibliographic sources.

1031
Lusk, Graham. Nutrition. New York Hoeber 1933. 142p. (Clio medica, no 10)
With bibliography

1032
Prentice, Ezra P Hunger and history; the influence of hunger on human history New York: Harper 1939. 269p.
Readable, well-documented history with bibliography

Encyclopedias, guides, handbooks

1033
American Medical Association. Council on Foods. Accepted foods and their nutritional significance: containing descriptions of the products which stand accepted by the Council. Chicago The Association, 1939 492p.
Includes information concerning commercial brands; still useful. Out of print.

1034
——Council on Foods and Nutrition. Handbook of nutrition; symposium prepared under the Council 2. ed. New York: Blakiston, 1951 717p.
Discussions of every phase of present-day knowledge concerning nutrition. Extensive bibliographic footnotes.

1034.1
Bicknell, Franklin, and Prescott, Frederick. The vitamins in medicine. 3. ed. London Heinemann, 1953. 784p.
Rewritten with special attention to advances in knowledge of the physiology and biochemistry of the vitamin B complex. Contains 5,500 references.

1035
Bomer Aloys W Juckenack, H. L. A., and Tillmans, Josef, eds. Handbuch der Lebensmittelchemie. Berlin Springer 1933–42. 9v in 12.
Probably one of the most exhaustive studies on the chemistry of foodstuffs. Laboratory methods, methods of investigation, and apparatus described and illustrated. V 4, 1939 *Fette und Öle Lipoide Wachse Harze Atherisch Öle* issued also as lithoprint by Edwards Brothers, Ann Arbor Mich., 1944.

1036 * *

Bridges, Milton A., *et al.* Dietetics for the clinician. 5 ed. Thoroughly rev and ed. by Harry J Johnson. Philadelphia: Lea & Febiger 1949 898p.

Numerous special diets outlined. Valuable practical tables of average body weights and of nutritive and caloric values of foods. The inclusion of brands of food and special dietetic and strained foods is an unusual feature. The tables are not so comprehensive as in Bridges (no. 1037) Good bibliography

1037 * *

Bridges, Milton A., and Mattice, Marjorie R. Food and beverage analyses. 3. ed. Philadelphia Lea & Febiger 1950. 412p.

Useful handbook. Contains perhaps the most complete food tables available, including commercial brands of foodstuffs.

1038

Coward, Katharine H. The biological standardisation of the vitamins. 2 ed. London Baillière, 1947 224p.

Determinations, including many tables, graphs, and illustrations. Brief bibliographies.

1039

Gillman, Joseph, and Gillman, Theodore. Perspectives in human malnutrition, a contribution to the biology of disease from clinical and pathological study of chronic malnutrition and pellagra in the African New York. Grune & Stratton, 1951 584p.

Includes extensive literature reviews. Bibliography

1040 * *

György Paul, ed V tamin methods. New York. Academic Pr., 1950–51 2v

Comprehensive handbook of research methods.

1041

Jacobs, Morris B., ed. Chemistry and technology of food and food products. 2. ed. New York: Interscience Publishers, 1951 3

Written by experts. Includes chemistry storage, inspection, sanitation, and preservation of every type of food.

1042 * *

Jolliffe, Norman, Tisdall, Frederick F and Cannon, Paul R., eds. Clinical nutrition. New York. Hoeber [1950] 925p.

Comprehensive study by 36 contributors, with excellent bibliographies and 127 illustrations, 61 in color Has 71 tables giving food values, dietary patterns, and ideal weights for men nd women.

1043 *

Keys, Ancel, *et al.* The biology of human starvation. Minneapolis Univ of Minnesota Pr 1950. 2v

Exhaustive study Correlates facts regarding famine in different parts of the world with the Minnesota experiment on controlled starvation. Extensive bibliography

1044

Monier Williams, Gordon W Trace elements in food. New York: Wiley 1950. 511p.

Arranged by elements. General discussion and methods of determination in foods. Excellent bibliographies.

1045 * *

Rose, Mary D S. A laboratory handbook for dietetics, 5 ed by Clara Mae Taylor and Grace MacLeod. New York Macmillan, 1949 358p.

Concise handbook with tables showing composition and nutritional values. Good bibliographies.

1046 * *

Sherman, Henry C. Food products. 4 ed. New York Macmillan, 1948. 428p.

Useful and concise handbook, arranged by type of food. Includes production, statistical and economic data, marketing, storage, sanitation, composition. T bles and bibliographies.

1047

Vogel, Hans. Chemie und Technik der Vitamine. 3. Aufl. Bearb. von Heinrich Knobloch. Stuttgart: Enke, 1950+ 2v

Comprehensive work with bibliographies. V 1 has a list of patents of all fat-soluble vitamins issued by different countries. Manufacturers' names given.

For food laws, see Commerce Clearing House (no. 1628); Dunn (no. 1629–31); Kleinfeld (no. 1632–32b)

FROSTBITE

see Cold and cold injury

GASTROENTEROLOGY

Bibliographies, indexes abstracts

1048

Bibliographie et listes courantes de gastroentérologie. *Acta gastro-enterologica Belgica* Bruxelles, *10* (1947)+

"Bibliographie" section of *Acta.* Abstracts include only books and journals published *outside* Belgium. For Belgian literature, see *Archiva medica Belgic* (no. 109)

1049

Bauer Julian W A complete bibliography of every publication related to gastroscopy. *Bulletin of the American Gastroscopic Society* (December 1950) special issue, 15p.
Arranged chronologically through 1949 On sale, for 10 cents, at editor's office, 1801 Eye Street, N W Washington, D.C.

SEE ALSO abstract, review or bibliographic sections of *American Journal of Digestive Diseases Archiv für Verdauungs-Krankheiten mit Einschluss der Stoffwechselpathologie und Diätetik, Archives des maladies de l'appareil digestif Archivos argentinos de enfermedades del aparato digestivo y de la nutrición Archivos españoles de enfermedades del aparato digestivo y de la nutrición Bronchoscopie oesophagoscopie et gastroscopie Deutsche Zeitschrift für Verdauungs- und Stoffwechselkrankheiten Gastroenterologia Gastroenterology Revista de gastro-enterología de México Revue médico-chirurgicale des maladies d foie*

Reviews

1050

Jones, F Avery ed. Modern trends in gastroenterology London Butterworth, 1952 [1953] 431p.
Reviews by many contributors on medical and surgical conditions.

Encyclopedias guides, handbooks

1051 * *

Bockus, Henry L. Gastro-enterology Philadelphia Saunders, 1943–46. 3v and index.
An exhaustive work.

1051.1 *

Portis, Sidney A., ed. Diseases of the digestive system. 3. ed. Philadelphia Lea & Febiger 1953. 1 119p.
Chapters by many authoritative contributors present recent advances in the field. Clear illustrations good bibliographies.

1052

Vonk, Herbertus J. Mansour Bek, J J and Sluiper E. J eds. "Digestion, *Tabulae biologicae 21* (1946+) pt. 1–3.
Exhaustive data, mostly in tabular form, on the physiology of digestion. Pt. 1 2 deal chiefly with vertebrates; pt. 3, not yet issued, will deal with invertebrates and will contain an addendum for the data since the completion in 1944 of the main manuscript. Pt. 2 issued 1953. Contributors mainly Dutch, but some from other countries. Good bibliographies.

SEE ALSO *Traité de médecine* (no. 519) VII and VIII.

GENERATION

SEE Sex and reproductive system.

GENETICS AND EUGENICS

Bibliographies indexes, abstracts

This is in no sense a comprehensive bibliography for these subjects. Other such works can be found in Winchell *Guide* and comparable publications. Selection here has been based on the indirect application of these tools to the medical sciences or on the fact that they offer general bibliographic works from which the medical scientist can select material of interest.

1053

Bibliographia eugenica. Cold Spring Harbor N Y 1–2, 1927 34
Supplement to *Eugenical News.* A classified subject bibliography Rather restricted in scope.

1054

Bibliographia genetica. 's-Gravenhage, 1, 1925+
Monographs with good bibliographies. Useful as reviews of the literature.

1055

Resumptio genetica. 's Gravenhage, v.1, 1924+
Index and abstract journal. Good for foreign literature. Each issue contains, besides abstracts, a bibliography of current literature, "Bibliographia nova.

SEE ALSO Biological Abstracts (no. 768a)

SEE ALSO abstract, review or bibliographic sections of *Acta geneticae medicae et gemellologiae American Journal of Human Genetics A nal of Eugenics Folia hereditaria et pathologica, Genetics Heredity*

Reviews

1056

Advances in Genetics. New York, 1 1947+
Good review articles with bibliographies.

Histories

1057

Cole, Francis J Early theories of sexual generation. Oxford Clarendon Pr 1930. 230p.
Useful history with bibliography

1058

Dunn, Leslie C., ed. Genetics in the 20th century; essays on the progress of genetics dur-

ing its first 50 years. New York: Macmillan, [1951] 634p.

Chapters, by different authors, on the knowledge of heredity before 1900, genetics and immunology genetic studies in bacteria, genetics and disease resistance, and genetics and the cancer problem. Bibliographies.

Encyclopedias guides handbooks

1059 *

Gates, Reginald R. Human genetics. New York: Macmillan, 1946. 2

Well indexed and documented.

1060

Handbuch der Erbbiologie des Menschen, in Gemeinschaft mit K. H. Bauer E. Hanhart, J. Lange hrsg. von Günther Just. Berlin: Springer 1939–40. 5v in 8.

Extensive work on human heredity and anthropology both physical and social. Of especial interest to medicine are the volumes on the inheritance of diseases and of anatomic and physiologic anomalies and disorders.

1061

Treasury of Human Inheritance. London, v.1 1909+

Classic studies on the inheritance of disease. Includes many charts, tables, and good bibliographies. Very irregular. *Eugenics Laboratory Memoirs* published by the Galton Laboratory of the University of London, numbers these issues as belonging to their series, but the later issues themselves carry no notice of this fact.

Dictionaries

1062

Knight, Robert L. Dictionary of genetics including terms used in cytology animal breeding and evolution. Waltham, Mass. Chronica Botanica, 1948. 183p. (Lotsya biological miscellany no. 2.)

Appendixes, no. 1–7 give useful formulas and coefficients used in genetics. No. 8, international rules for symbolizing genes and chromosome aberrations. No. 9 distances recommended to avoid seed contamination. Bibliography.

GERIATRICS

Bibliographies, indexes abstracts

1063 *

Shock, Nathan W. A classified bibliography of gerontology and geriatrics. Stanford Univ Calif. Stanford Univ. Pr. 1951. 599p.

Good bibliographic citations. List of journals cited, with abbreviations. Kept up to date in current issues of the *Journal of Gerontology*.

1064

U.S. Federal Security Agency Library. Selected references on aging: an annotated bibliography. Comp. for the Committee on Aging and Geriatrics. [Washington Govt. Print. Off. 1952.] 36p. Processed.

Significant material for both the layman and the professional worker. Classified by subject. No index.

see also abstract, review or bibliographic sections of *Geriatrics Journal of the American Geriatrics Society Zeitschrift für Altersforschung*

Histories

1065

Zeman, Frederic D. "Life's later years." *Journal of the Mount Sinai Hospital* 8 (1942) 1,161–65 *11* (1944–45) 45–52, 97–104, 224–31 300–07 339–44 *12* (1945–46) 783–92, 833–46, 890–901 939–53; *13* (1946–47) 241–56; *16* (1949–50) 3–68.

In 12 parts through the nineteenth century. The author plans to bring it up to date and to issue it later in book form. Part 2 published with title, "Old age in ancient Egypt."

Encyclopedias guides handbooks

1066 * *

Cowdry, Edmund V. ed. Problems of ageing: biological and medical aspects. 3. ed. Ed. by Albert I. Lansing. Baltimore: Williams & Wilkins, 1952. 1,061p.

One of the best works on geriatrics. Good bibliographies.

1067

Pearl, Raymond, and Pearl, Ruth D. The ancestry of the long-lived. Baltimore: Johns Hopkins Pr. 1934. 168p.

A summary of investigations on human longevity appearing as one of the "Studies on human longevity" in *Human Biology*. Includes variations, hereditary factors, and biometric considerations; many charts and tables.

1068 * *

U.S. Federal Security Agency. Committee on Aging and Geriatrics. Fact book on aging. Washington. [The Agency, 1952] 62p.

Contains 21 charts and 35 tables with text and graphic data on the aging population of the United States.

Directories

1069

U.S. Bureau of Labor Statistics. Homes for aged in the United States. Washington: Govt. Print. Off., 1941. 126p. (Its Bulletin no. 677)

Arranged by state. No index.

GROWTH

SEE ALSO Endocrinology; Food and nutrition; Pediatrics and child welfare.

Encyclopedias, guides, handbooks

1070

Greulich, William W., and Pyle, S. Idell. Radiographic atlas of skeletal development of the hand and wrist based on the Brush Foundation Study of human growth and development initiated by T. Wingate Todd. Stanford Univ., Calif.: Stanford Univ. Pr. [1950] 190p.

Text and photographic reproductions of radiographs showing male and female hand from birth to the age of eighteen. Section on "maturity indicators" of individual bones and epiphyses.

1071

Krogman, Wilton M. "Growth of man," *Tabulae Biologicae* 20 (1941) 963p.

Detailed tables of measurements by parts of body, age, nationality, constitutional type, etc. Based on literature for the period 1926–38.

1072 * *

Macy, Icie G. Nutrition and chemical growth in childhood. Springfield, Ill.: Thomas, 1942–51. 3v.

Comprehensive study of growth patterns, emphasizing biochemical and metabolic processes. V. 1. Evaluation—contains extensive bibliography; 2, Original data; 3, Calculated data. Future volumes to be issued from time to time.

GYNECOLOGY

SEE Obstetrics and gynecology

HEART

SEE Circulatory system and heart.

HELMINTHOLOGY

SEE Bacteriology, mycology, parasitology, i-muner; Zoology

HEMATOLOGY

Bibliographies, indexes, abstracts

1073

Plasma. Review for the chemical, phylopathological and clinical study of the plasma proteins. Milano, 1 1953+

Articles in Italian, English, German, French, or Spanish. Designed to present original world literature, also "Systematic bibliography" thoroughly annotated and supplementing the extensive bibliography in Enrico Polli's *Europatol gra... clinica del protoplasma* (Milano: Delfino, [1951]) 1,331p.

1074

Red Cross. Germany. Deutsches Rotes Kreuz. Blutübertragung und Blutspendewesen: ein Literaturbericht. Ausgearb. im Auftrag der Organisationsleitung der Blutspendezentrale des Deutschen Roten Kreuzes Nordrhein-Westfalen. Redaktion. S. Seher. Zeitraum 1945–1951. Münster Westfalen: Weißheimer Verlag für Wissenschaft und Technik, 1951. 70 leaves. Mimeographed.

Subject arrangement of 430 references, many with abstracts or annotations.

1075 *

U.S. Army Medical Library. Plasma substitutes except those derived from human blood, 1940–1951; an annotated bibliography. Comp. by Karl A. Baer. Washington: The Library, 1951. 141p. Processed.

Comprehensive classified list of 888 references.

SEE ALSO abstract, review, or bibliographic sections of *Acta haematologica*; *Blood*; *Haematologica*; *Revue d'hématologie*; *Sang*.

Encyclopedias, guides, handbooks

1076

Albritton, Errett C., ed. Standard values in blood ... ed. under direction of the Committee on the Handbook of Biological Data, American Institute of Biological Sciences, the National Research Council. Philadelphia: Saunders, 1952. 199p. (AF Technical Report no. 6,039)

Data on blood and blood cells in tabular form. Compiled by U.S. Department of the Air Force. Well documented.

1077 *

American Medical Association. Committee on Blood Banks. Survey of blood banks in the United States and possessions; report to the Committee by Frank G. Dickinson

and Everett L. Welker Chicago The Association, 1950. 36p. and map suppl. (A.M.A. Bureau of Medical Economic Research. Bulletin no. 75.)

1078

Blackfan, Kenneth D and Diamond, Louis K. Atlas of the blood in children. New York: Commonwealth Fund, 1944 320p.

Blood dyscrasias in children, illustrated by C. Merrill Leister Brief text, bibliography and 70 colored plates.

1079

Custer Richard P An atlas of the blood and bone marrow Philadelphia Saunders, 1949 321p.

Contains 285 illustrations, 42 in color First section devoted to the normal. Then, in pictures, changes in the peripheral blood are correlated with changes in bone marrow i diseases affecting blood forming organs.

1080 * *

Daland, Geneva A. A color atla of morphologic hematology with guide to clinical interpretation, ed. by Thomas H. Ham, illustrations by Etta Piotti Cambridge, Mass. Harvard Univ Pr 1951 74p.

A diagnostic guide 14 colored plates made from preparations using Wright's stain.

1081 *

DeGowin, Elmer L., Hardin, Robert C and Alsever John B. Blood transfusion. Philadelphia Saunders, 1949 587p

Compact, well illustrated. Emphasis on clinical pplications and patients reactions. Information on blood banks not so complete as in White (no 1086)

1082 *

Downey Hal, ed Handbook of hematology New York Hoeber 1938. 4v

Comprehensive 1 445 illustrations nd excellent bibliographies

1083

Hirschfeld, Hans, and Hittmair Anton, eds. Handbuch der allgemeinen Hämatologie. Berlin Urban & Schwarzenberg, 1932–34. 2v in 4.

Very comprehensive. Good illustrations and bibliographies.

1084 * *

Kracke, Roy R Diseases of the blood and atlas of hematology with clinical and hematologic description of the blood diseases, including section on technic and terminology 2 ed Philadelphia Lippincott, [1941] 692p.

Comprehensi section on technique Excellent plates, useful in diagnostic studies. Good bibliographies. Kracke has based his *Color-atlas of hematology* (Philadelphia Lippincott, [1947]) 204p. and 35 plates, on data from this work. Arranged to summarize blood findings in disease.

1085 * *

Tullis, James L., ed. Blood cells and plasma proteins their state in nature. New York: Academic Pr., 1953 436p. (Memoirs of the University Laboratory of Physical Chemistry Related to Medicine and Public Health, Harvard University no. 2.)

The 29 contributors summarize the present state of knowledge. Chapter 1 historical review References.

1086 * *

White, Charles S., and Weinstein, Jacob J Blood deri tives and substitutes; preparation, storage, administration and clinical results including a discussion of shock, etiology physiology pathology and management. Baltimore Williams & Wilkins, 1947 484p.

Especially useful in connection with blood banks, but ll phases of transfusion are discussed.

SEE ALSO *Traité de médecine* (no. 519) XII.

HERBALS

SEE Botany and griculture.

HEREDITY

SEE Genetics and eugenics.

HISTOLOGY

SEE Anatomy histology embryology

HOMEOPATHY

Biographie

1087

Bradford, Thomas L. The pioneers of homoeopathy Philadelphia Boericke & Tafel, 1897 677p

Chiefly Europeans

1088

Cleave, Egbert. Biographical cyclopaedia of homoeopathic physicians and surgeons. Philadelphia Galaxy Pub Co 1873. 506p.

Devoted to those of the United States. With portraits.

Hi tories

1089

King, William H ed. History of homoeopathy and its institutions in America. New

York and Chicago: Lewis Pub. Co., 1905 4v
An exhaustive work by different authors, useful for biographies, accounts of hospitals and medical colleges, and lists of journals.

1090
Tischner Rudolf. Geschichte der Homöopathie. Leipzig: Schwabe, 1932–39 4 pt. in 1v
Exhaustive history with biographies.

HORMONES

see Endocrinology; Enzymology

HOSPITALS

Bibliographies, indexes abstracts

1091 * *
Index of Current Hospital Literature. Chicago, v.1 1945+
Published semiannually by the American Hospital Association. Has five year cumulative index, 1945–49 entitled *Cumulative Index of Hospital Literature*. Useful especially to hospital and nursing school libraries. Also to medical libraries, since it covers journals not indexed by the medical services. Covers American, British, and Canadian literature only

1092
U.S. Veterans Administration. Medical and General Reference Library. Hospital administration and management; selected bibliography. Washington: The Library, 1952. 67p.
Has 969 references and list of periodicals. Frequently revised.

Histories

It would be impossible to enter here the many valuable histories of individual hospitals or hospitals in individual cities. These may be found in the general indexes (no. 82–132). The histories of nursing (no. 1224–32) often contain helpful information on the subject also.

1093
Aguilar, Gilberto F. Hospitales de antaño; fundación de algunos hospitales de la República. México, 1944. 190p.
Short sketches of Mexican hospitals with bibliography.

1094
Clay, Rotha M. The mediaeval hospitals of England. London: Methuen, [1909] 357p. (The antiquary's books.)
Useful study with chapters on hospitals for wayfarers and the sick; homes for the feeble, destitute, insane; the leper in England; hospital inmates and dwellings; hospital funds, relations with church and state; hospital patron-saints, etc. With list of foundations and bibliography.

1095
Imbert, Jean. Histoire des hôpitaux français: contribution à l'étude des rapports de l'église et de l'état dans le domaine de l'assistance publique, les hôpitaux en droit canonique. Paris: Vrin, 1947. 334p. (L'église et l'état au moyen âge, no. 8.)
Scholarly well documented through 1505.

1096
Ives, Arthur G. L. British hospitals. London: Collins, 1948. 49p.
Brief, illustrated sketch.

1097
Reicke, Siegfried. Das deutsche Spital und sein Recht im Mittelalter. Stuttgart: Enke, 1932. 2v
Well-documented study.

1098
Silva Correia, Fernando da. Origens e formação das misericórdias portuguesas. Lisboa: Torres, 1944. 661p. (Estudos sôbre história da assistência.)
Through the fifteenth century. With illustrations and bibliographic footnotes.

Encyclopedias, guides handbooks

1099
American Hospital Association. The magic key to hospital literature; guide to the use of the library of the American Hospital Association, Asa S. Bacon Memorial. [Chicago: The Association, 1952.] xxv+11p.
Lists subject headings for pamphlet files; gives selected list of 100 books by subject, but no journal articles. Directory of publishers.

1100
——Committee on Accounting and Statistics. Handbook on accounting, statistics and business office procedures for hospitals. Chicago: The Association, 1950+ (American Hospital Association. Publication no. M10–50.)
Supersedes the 1940 edition of *Hospital accounting and statistics. Bulletin no. 210*. Sections 1, 2 have been issued; others in preparation.

1101
American Medical Association. Council on Medical Education and Hospitals. Hospital

service in the United States. Chicago, v 1 1920+

An annual statistical study of hospitals from every angle, invaluable for ready reference. Forms the "Hospital number" of the Association's Journal, and also issued separately Includes directory of hospitals by state, which, beginning 1952, appears only in the separate issue.

1102

Major Hospital Atlas Announcements of Internships and Residencies, 1953+ Columbus, O 1952+

Edited by Donald J Holmes and William F Briggs. Information for interns and graduate physicians on hospitals in the U.S. Presented in pictures and concise readable sketches. Address 805 Neil Avenue, Columbus 8, O.

1103

Rosenfield, Isadore. Hospitals integrated design. 2. ed. New York Reinhold, 1951 398p.

Hospital planning: sketches and floor plans with text.

Directories

1104

American Association of Medical Clinics. Directory 1952. [Charlottesville, Va. The Association, 1952.] 31p.

Listing by clinic: staff members by specialty separate geographic listing

1105

American and Canadian hospitals a reference book of historical, statistical and other information regarding the hospitals and related institutions of the United States and possessions and the Dominion of Canada. 2. ed. Published under the supervision of American Hospital Association, Catholic Hospital Association of the United States and Canada, America Protestant Hospital Association, Canadian Hospital Council. Chicago. Physicians Record Co., [1937] 1464p.

Arranged by state and city Full notes. Includes brief accounts of hospital associations and of other associations in related fields. Out of print.

1106

American College of Hospital Administrators. Directory Chicago, 1938+

Biographies of Fellows, giving positions, education, organizations.

1107 * *

—— Roster of membership [nd] geographical index. Chicago, 1938+

Constitution nd list of acti members with addresses; regional index. Nominees for membership included in regional index only

1108

American College of Surgeons. Annual hospital standardization report, *Bulletin of the American College of Surgeons 3* (1918)+

Not so comprehensive as American Medical Association (no. 1101) Lists approved hospitals in U S. and Canada.

1109

Canada. Bureau of Statistics. Health and Welfare Division. Institutions Section. Directory of hospitals in Canada. 1950. Ottawa: Queen's Printer and Controller of Stationery 1952. 94p.

Arranged by provinces and specialties. Includes list of schools of nursing, section on standardization, and list of approved hospitals.

1110 *

Canadian hospital directory published by Canadian Hospital Council. [Toronto. The Council] 1953+

Contains information not included in other Canadian directories. Lists hospitals educational programs in the hospital field approved nurses' training programs nd approved hospitals for internships; and buyers guide for hospital supplies and equipment. 1953 edition has 156p.

1111 * *

Hospitals. Administrators guide issue. Part II of the June issue of *Hospitals* American Hospital Association, Chicago, 1949+

1946–48 as *American Hospital Directory* published separately Statistical tabulations. Hospitals listed by state, then city Facilities indicated by code symbols. A list of the individual members of the Association with addresses a list of professional schools, and a management and purchasing guide. Indispensable for hospitals and medical libraries. Can be purchased separately

1112

The Hospitals Year Book, an Annual Record of the Hospitals of Great Britain and Northern Ireland incorporating "Burdett's Hospital and Charities, founded 1889 London [1] 1931+

Currently issued by the Institute of Hospital Administrators. Directory arranged under localities by type of hospital; statistical tables, financial reports, directory of health services.

see also American Medical Association (no 523) *American medical directory* (no 278) *American pediatric directory* (no.

1378); Planned Parenthood Federation of America (no. 790); Fifield (no. 282); International Ophthalmological Council (no. 1291); *Medical Directory* (no 257); National Association for Mental Health, *Directory* (no 1545); National Society for Crippled Children (no. 1394); National Tuberculosis Association (no. 1903); New York Academy of Medicine, *Directory of convalescent homes* (no. 902); U.S. *Directory of clinics* (no. 1725); U.S. *Homes for aged* (no. 1069)

HYGIENE

SEE Industrial medicine and hygiene; Public health, epidemiology hygiene, sanitation.

INDUSTRIAL MEDICINE AND HYGIENE

Bibliographies, indexes abstracts

1113

Bibliography of Industrial Hygiene. Geneva, v.1 15 1923–41

Published by the International Labour Office. French title, *Bibliographie d'hygiène industrielle* A classified bibliography valuable for foreign literature. Headings in English, French, and German. Includes much material not in the *Quarterly Cumulative Index Medicus* (no. 99) Covers material in medical journals and, to some extent, in monographs, government bulletins, and nonmedical journals. Continued in *Bibliography of Occupational Medicine* (no. 1114)

1114

Bibliography of Occupational Medicine. Geneva, 1–3, 1948–50.

Published by the International Labour Office. Discontinued with v.3, no. 4, 1950. Supersedes its *Bibliography of Industrial Hygiene* 1–15 1923–1941 (no. 1113) Classified subject arrangement.

1115

Davis, George G., Salmonsen, Ella M., and Earlywine, Joseph L. The pneumonokonioses (silicosis) bibliography and laws. Chicago: Industrial Medicine, Inc., 1934–[37] 3 v.

V 1 consists of bibliography for 1556–1934 followed by laws on occupational diseases and workmen compensation arranged by state. V 2 3 contain lengthy abstracts of literature for 1934–36 and bring laws up to 1936. Geographic, subject, and author indexes.

1116

Industrial Hygiene Digest. Pittsburgh, 1 1937+

Published by the Industrial Hygiene Foundation, Mellon Institute (before 1941, Air Hygiene Foundation of America) Monthly issues consist mainly of classified abstracts. I 1953, issued a list of journals covered (no. 1117)

1117

Industrial Hygiene Digest. Publications source list. 1953 ed. Pittsburgh, Industrial Hygiene Foundation, [1953] 55p. Processed.

Names, abbreviations, and addresses of publications covered by the *Digest*. Besides medical titles, list contains journals on engineering, chemistry technology also government documents.

1118

U.S. Public Health Service. Bibliography of industrial hygiene 1900–1943 selected list. Washington. Govt. Print. Off., 1945. 95p. (Public Health Bulletin no. 289)

Highly selective. No foreign literature.

1119

——Division of Industrial Hygiene. Biological aspects of air pollution an annotated bibliography by Harry Heimann [et al] [Pittsburgh] United Steelworkers of America (CIO) 1950. 67 leaves.

Arranged by subject; 321 numbered entries. Available from CIO Publicity Department, Room 15,000, Commonwealth Building Pittsburgh, Pa., price, 50 cents.

SEE ALSO abstract, review, or bibliographic sections of *A.M.A. Archives of Industrial Hygiene and Occupational Medicine*; *Archives des maladies professionnelles*; *Arkiv för hygien och medicin*; *Arkiv för medicin och ...*; *British Journal of Industrial Medicine*; *Journal of Industrial Hygiene and Toxicology*; *Travail humain*; *Zentralblatt für Gewerbehygiene und Unfallverhütung*

Reviews

1120

Forbes, J J Davenport, Sara J and Morgis, Genevieve G. Review of literature on dusts. Washington: Govt. Print. Off., 1950. 333p. (U.S. Department of the Interior Bulletin 478.)

Revision of *Bulletin* 400, 1937 with selected supplementary data. Selective bibliography of 657 items. Deals with prevention control, and economic aspects of pneumoconiosis, silicosis, and related diseases.

Biographies

1121

Who's who in industrial medicine. 2. ed. Chicago: Industrial Medicine Pub. Co., 1945. 421p.

1. ed., 1936. Lists physicians, surgeons, dentists, and hygienists. Personal and professional data geographic index.

Histories

1122
Rosen, George. The history of miners diseases a medical and social interpretation. New York, Schuman, 1943. 490p.
Excellent study through the nineteenth century well documented, with bibliography

1123
Teleky Ludwig History of factory and mine hygiene. New York; Columbia Univ Pr 1948. 342p.
Development of industrial hygiene through the nineteenth century With lengthy bibliography

Encyclopedias, guides handbooks

1124
International Labour Office. Occupation and health encyclopaedia of hygiene, pathology and social welfare [rev ed.] Geneva The Office, 1930–34 2v Loose leaf supplement, 1938–41. Special supplement, 1944 "Industrial health in war-time.
Published originally in separate brochures, 1925–34 Arranged by subject.

INTERNAL MEDICINE

see, for modern works, Medicine; for histories, Clinical and internal medicine.

JEWS IN MEDICINE

see Religion and medicine.

JURISPRUDENCE MEDICAL

see also Public health, epidemiology, hygiene, sanitation—Laws; Social welfare Venereal diseases.

Bibliographies, Indexes abstracts

see abstract, review or bibliographic sections of *Archivio di medicina legale Deutsche Zeitschrift für die gesamte gerichtliche Medizin Medico-legal and Criminological Review Medico-legal journal Minerva medico-legale Revue criminologie Revue de droit pénal et de criminologie et archives internationales de médecine légale Zacchia rivista di medicina legale*

Encyclopedias guides handbooks

1125
American Medical Association. Bureau of Legal Medicine and Legislation. Medicolegal cases abstracts of court decisions of medico-legal interest. Chicago The Association, 1932–46. 4v
First volume contains abstracts published in the Association's *Journal for 1926–30*, ed. by William C. Woodward second volume, those for 1931–35; third volume, those for 1936–40 fourth volume, those for 1941–46. Of interest to both physicians and lawyers. Convenient for ready reference. Subject and case indexes.

1126
—— Council on Medical Education and Hospitals. **Laws** (abstract) and board rulings regulating the practice of medicine in the United States of America and abroad. 42. ed. Chicago. The Association, 1933. 345p.
Brief discussions arranged by state within the United States, then other countries. Includes South America, Europe, Asia, and Africa. Supplemented by the annual state board issues of the *Journal* of the A. M. A.

1127
—— Medico-Legal Bureau. A digest of the case law on the statutory regulation of the practice of medicine. Chicago The Association, 1915 504p.
Interpretation of medical practice acts. Contains abstracts of Supreme Court decisions on the regulation of the practice of medicine arranged chronologically by state.

1128 *
Davidson, Henry A. Forensic psychiatry New York Ronald Pr [1952] 398p.
Excellent, practical reference book for the psychiatrist as expert witness, also a psychiatric-legal guide for physicians.

1129 * *
Hayt, Emanuel, Hayt, Lillian R and Groeschel, August H Law of hospital, physician, and patient. 2 ed. New York Hospital Textbook Co 1952. 804p.
Deals comprehensively with medico-legal aspects of hospital activities, administration, and relations with patients.

1130
Lott, Jack N and Gray Robert H. Law in medical and dental practice. Chicago: Foundation Pr 1942. 499p.
Useful survey of the legal problems of the physician and dentist, supplemented by case citations and law review notes.

LABORATORIES

see also Diagnosis; Technique.

Bibliographies, Indexes, abstracts

see abstract, review or bibliographic sections of *Laboratory Investigation.*

Directories

1131

Directory of Biological Laboratories. Chicago, 1 1941+ Processed.

Lists over 1,000 laboratories of the U S. and Canada concerned with biochemical, bacteriologic, or biologic investigations, including research departments of manufacturers of food products, pharmaceuticals, biochemicals, etc. also independent research establishments. Obtainable from Burns Compiling and Research Organization, 80 E. Jackson Blvd., Chicago, Ill.

1132 *

National Research Council. Industrial research laboratories in the United States including consulting research laboratories. 9 ed. comp. by Myron J Rand with the assistance of Winnie Frances Yount. Washington The Council, 1950. 444p. (Its Bulletin no. 120.)

Arranged by laboratory revised frequently Has geographic and personnel indexes, subject index to research activities, and list of serials published by the laboratories. Useful for locating industrial organizations carrying on investigations of importance to medicine and public health.

SEE ALSO Hirsch (no. 772)

LARYNGOLOGY

SEE Oto-rhino-laryngology

LEPROSY

Bibliographies, indexes abstracts

1133

São Paulo, Brazil. Departmento de Profilaxia da Lepra. Biblioteca. Indice bibliográfico de lepra, 1500–1943. Organizado por Luiza Keffer São Paulo, Brazil: [Emprêsa Gráfica da "Revista dos tribunais"] 1944–48. 3

Bibliography with authors and subjects in one alphabet, of works in the Department library List of journals covered.

SEE ALSO abstract, review or bibliographic sections of *International journal of Leprosy Lepra Revista brasileira de leprologia; Revista de afilografia leprologia y dermatologia.*

Histories

1134

Fay Henri M. Histoire de la lèpre en France; lépreux et cagots du sud-ouest. Paris Champion, 1910. 784p.

Well documented, with bibliography

1135

Frohn, Wilhelm. Lepradarstellungen in der Kunst des Rheinlandes. Berlin: Junker & Dünnhaupt, 1936. 105p. (Neue deutsche Forschungen. Abteilung Geschichte der Medizin, Bd. 1.)

Illustrated, with bibliography

1136

Mouritz, Albert A. St. M. A brief world history of leprosy: Hawaii, U.S. America, Philippines, Malaya, Fiji, China, India, Europe. [2. ed.] [Honolulu The Author 1943.] 139p.

Sketchy history chiefly about Hawaii. With chronology and illustrations.

1137

Sil Carvalho, Augusto da. Epidemiologia portuguesa, historia da lepra em Portugal. Pôrto Oficina Gráfica da Sociedade de Papelaria, 1932. 223p.

Contains section on leprosy in the Portuguese colonies. With bibliography no index.

1138

Souza-Araujo, Heraclides C. de. Historia da lepra no Brasil. Rio de Janeiro: Imprensa Nacional, 1946–48. 2

V 1 elaborate and detailed, with facsimiles of original documents, 1500–1889 2. reproductions of photographs with brief legends, 1889–1946.

1139

Weymouth, Anthony *pseud.* Through the leper-squint; study of leprosy from pre Christian times to the present day London: Selwyn & Blount, [1938] 286p.

General history with chronologic tables nd bibliography

1140

Zambaco, Démétrius A., pacha. La lèpre à tra ers les siècles et les contrées. Paris Masson, 1914. 845p.

Detailed study without index.

Encyclopedias, guides, handbooks

SE Jadassohn (no. 1719) 10, Pt. 2, 1930, and its supplement, 1938.

LIBRARIES

Material on libraries, general and special, has been gathered together here. Winchell' *Guid* has extensive lists, a few of which include: the American Library Association

Membership directory the American library directory Library Literature Library Science Abstracts Unesco Bulletin for Libraries (Paris .1 1947+) *Who's who in library service* ed. by Dorothy E. Cole. 3. ed. (New York: The Grolier Society 1955) 546p.

Encyclopedias guides handbooks

1141 *

Special Libraries Association. Science Technology Division. Technical libraries their organization and management. Lucille Jackson, ed. New York: The Association, [1951] 202p.

Guide to special techniques and bibliographic information for science-technology libraries. Well-organized, concise book containing aluable information. The appendix has bibliographies, but they are not extensiv enough in any one field to constitute guide to the reference literature of a subject.

Directories

1142

Le Fanu, William R. A list of medical libraries and information bureaux in the British Isles, *Journal of Documentation* 2 (1946) 119–46.

Arranged by locality London first, then other cities.

1143 * *

Medical Library Association. Directory of medical libraries belonging to the Medical Library Association comp. by the Committee on Directory [Boston The Association] 1950. 96p.

Libraries listed by state. Fairly full information. Includes Association's by-laws and interlibrary loan code. A directory of all members of the Association has appeared biennially in its *Bulletin* during recent years.

1144 *

Special Libraries Association. Special library esources. Ed. by Rose L. Vormelker New York: The Association, [1941]–47 4v Proceed.

Covers the United States and Canada, listing 765 research (including medical) library collections, arranged by state and city with a subject index. Data on staff materials, periodicals, and special collections.

Dictionaries

1145

Lemaître, Henri. Vocabularium bibliothecarii, English/Anglais, French/Français, German/Allemand begun by Henri Le maître; rev and enl. by Anthony Thompson. [Paris] UNESCO, [1953] 296p. (UNESCO bibliographical handbooks no. 2.)

Begun under the auspices of the International Institute of Intellectual Co-operation, and contin ed by Marcel Godet and Pierre Bourgeois of the Swiss National Library Gives 2,500 terms connected with all sorts of library work, in English, French, and German. Useful for library workers abroad or in libraries which foreign students or physicians visit.

LITERARY WORKS OF PHYSICIANS

Bibliographies indexes abstracts

1146

Dana, Charles L. Poetry and the doctors. Woodstock, Vt Elm Tree Pr 1916. 83p.

Checklist with brief biographies.

1147

Davenport, James H. Literary doctors of medicine. [p.] Privately printed, [1926] 306p.

Checklist, arranged by subject: addresses, essays, miscellanies; art and the drama autobiography; biography cyclopedias of medical biography; fiction history poetry travel books about doctors. Useful biographic index of authors.

MAGIC

88 Superstitions, magic, folklore.

MALARIA

Bibliographies indexes abstracts

871 bstract, review or bibliographic sections of *Revue du paludisme et d médecine tropicale Rivista di malariologia*

Histories

1148

Ackerknecht, Erwin H. Malaria in the upper Mississippi Valley 1760–1900. Baltimore: Johns Hopkins Pr 1945 142p. (Supplements to the Bulletin of the History of Medicine no. 4.)

Excellent w ll-documented history

1149

Celli, Angelo. The history of malaria in the Roman Campagna from ncient times. Ed.

and enl. by Anna Celli-Fraentzel. London. J Bale, Sons & Danielsson, 1933. 226p.
Well-documented study from pre-Roman times through the nineteenth century with brief notes on the early twentieth century

1150
Childs, St. Julien R. Malaria and colonization in the Carolina low country 1526–1696. Baltimore: Johns Hopkins Pr 1940. 292p. (Johns Hopkins University Studies in historical and political science. 58. ser no. 1)
Detailed history through 1696.

1151
Duran-Reynals, Marie L. The fever bark tree; the pageant of quinine. Garden City N.Y.: Doubleday 1946. 275p.
Readable story from the time of Alexander the Great to World War II. With bibliography

1152
Jaramillo-Arango, Jaime. The conquest of malaria. London: Heinemann, 1950. 125p.
Sketchy account.

1153
Jones, William H. S. Malaria and Greek history. Manchester: Univ Pr., 1909. 175p.
Careful study with bibliographic references.

1154
Warshaw Leon J Malaria the biography of a killer New York: Rinehart, [1949] 348p.
A readable story With bibliography

SEE ALSO Muñoz (no. 1610)

Encyclopedias guides, handbooks

1155 *
Boyd, Mark F ed. Malariology; comprehensive survey of all aspects of this group of diseases from a global standpoint. By sixty-five contributors. Philadelphia: Saunders, 1949 2 paged continuously 1,643p.
The most comprehensive work on the subject. Good bibliographies.

1156
Coatney G. Robert, *et al.* Survey of antimalarial agents. Chemotherapy of *Plasmodium gallinaceum* infections; toxicity- correlation of structure and action. [Washington Govt. Print. Off., 1953.] 323p (Public Health Monographs no. 9)
Nearly 4,000 compounds covered.

1157
National Research Council. Division of Medical Sciences. Primate malaria, by Sophie D. Aberle. [Washington] The Council's Office of Medical Information, 1945 171p. Processed.
Comprehensive review; some colored plates and extensive bibliography

1158
Ross, Edward S., and Roberts, Howard R. Mosquito atlas. Philadelphia American Entomological Society [and] Academy of Natural Sciences, 1943 Pt. 1–2.
Pt. 1 The Nearctic Anopheles, important malaria vectors of the Americas and Aëdes aegypti, Culex quinquefasciatus. Pt. 2., Eighteen Old World anophelines important to malaria. Good illustrations.

1159
Russell, Paul F Rozeboom, Lloyd E., and Stone, Alan. Keys to the anopheline mosquitoes of the world, with notes on their relation to malaria. Philadelphia: American Entomological Society [and] Academy of Natural Sciences, 1943. 152p.
Prepared for the Preventive Medicine Division, Office of the Surgeon General, U.S. Army Excellent diagrammatic drawings.

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Wiselogle, Frederick Y., ed. A survey of antimalarial drugs 1941–1945 Ann Arbor Mich Edwards, 1946. 2v in 3. Processed.
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1161
Covell, Sir Gordon, Russell, Paul F and Swellengrebel, N. H. Malaria terminology: report of a drafting committee appointed by the World Health Organization. Geneva World Health Organization, 1953. 82p. (World Health Organization. Monograph series no. 13.)
A revision of League of Nations Malaria Commission's "Report on terminology in malaria, *Bulletin of the Health Organisation of the League of Nations* 9 (1940) 131–246. A report on French malaria terminology is in preparation.

1162
Pan American Sanitary Bureau. Terminología panamericano del paludismo. Pan American malaria vocabulary Washington: Oficina Sanitaria Panamericana, 1945. 62p. (Its Publication no. 211.)
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Useful for military engineers and field workers in Latin America.

MEDALS MEDICAL

Encyclopedias guides handbooks

1163

Brettauer Josef. Katalog der Sammlung Medicina in nummis, hrsg vom Kuratorium der Dr Josef Brettauer-Stiftung; verfasst von Eduard Holzmair Wien: Selbstverlag, 1937 384p.

Excellent list of medical medals. Good bibliography

1164

Hume, Edgar E. The medals of the United States Army Medical Department and medals honoring Army medical officers. New York. American Numismatic Society 1942. 146p. (Numismatic notes and monographs no. 98.)

With short histories of the Medical Department schools, biographies of those for whom the medals are named, and lists of recipients.

1165 *

Storer Horatio R. Medicina in nummis: a descriptive list of the coins, medals, jetons, relating to medicine, surgery and the allied sciences. Ed. by Malcolm Storer [Boston Wright & Potter 1931] 1 146p.

Includes medals relating to physicians, surgeons, veterinarians, dentists, pharmacists, empirics, hospitals, medical colleges and societies, epidemics, sanitation, and, in fact, everything associated with the medical art. Divided into ancient medical medals, personal medals, and general medals.

MEDICINE OF HISTORY AND LITERATURE (INCLUDING DISEASES OF FAMOUS PEOPLE)

Histories

1166

Bett, Walter R. The infirmities of genius London Johnson, [1952] 192p.

Chapters on Carlyle, Shelley Christopher Smart, Whitman, Swinburne, Poe, Lamb De Quincey Baudelaire, Balzac, Keats, Burns, Byron, Pope, Lafcadio Hearn.

1167

Bucknill, Sir John C. The medical knowledge of Shakespeare. London Longman, 1860. 291p.

Quotations from Shakespeare's works, with commentary

1167 1

Cabanès, Augustin.

The many books on the subject by this author cannot be listed here, but may be found entered in the *Index-Catalogue* (no. 104)

1168

Dale, Philip M. Medical biographies the ailments of thirty-three famous persons. Norman: Univ of Oklahoma Pr [1952] 259p.

Brief accounts of Buddha, Charlemagne, William the Conqueror Columbus, Henry VIII, Cellini, Philip II, Pepys, Newton, Swift, Peter the Great, Frederick the Great, Kant, Catherine the Great, Washington, Gibbon, George III, Marat, John Paul Jones, Andrew Jackson, Napoleon, Nancy Hanks Lincoln, Byron, Keats, Poe, Darwin, Whitman, Frederick III of Prussia, Garfield, Cleveland, McKinley de Maupassant, R. L. Stevenson.

1169

Gould, George M. Biographic clinics. Philadelphia Blakiston, 1903–09 6v

"Influence of visual function on health, with chapters concerning famous people who have suffered from such ailments. Some chapters ppeared previously in medical journals.

1170

Kemble, James. Hero-dust. London: Methuen, [1936] 192p.

Chapters on Mary Queen of Scots; Epicurus; Catherine the Great; John Milton Beau Brummell; Omar Khayyám and the influence upon their lives of physical disorders.

1171

—— Idols and invalids. [2. ed.] London: Methuen, [1935] 211p. (The fountain library)

Chapters on Columbus, Judge Jeffreys, Louis XV the Borgias, Cleopatra, Lord Nelson, Henry VIII, Queen Anne.

1172

MacLaurin, Charles. Post mortems of mere mortals. Garden City N.Y.: Doubleday 1930. 291p.

First published in medical journals, then a two separate volumes entitled *Post mortems* and *Mere mortals*. Interesting chapters on many famous people and the influence on their lives of their physical disorders.

1173

Major Ralph H. Disease and destiny New York Appleton Century 1936. 338p.

Readable work with chapters on: black death, jail fever king' evil, smallpox, membranous croup, malaria, leprosy yellow jack, hemophilia, syphilis.

1174

Moorman, Lewis J Tuberculosis and genius. Chicago. Univ of Chicago Pr [1940] 271p.

Chapters on famous people who had tuberculosis. With bibliography. Not identical with the articles by him which appeared under the same title in *Annals of Medical History* 1930–39.

1175

Myers, Jay A. Fighters of fate. Baltimore: Williams & Wilkins, 1927. 318p.

Chapters on famous people who had tuberculosis.

1176

Pomeranz, Herman. Medicine in the Shakespearean plays and Dickens' doctors. New York: Powell Publications, 1936. 410p.

The section on Shakespeare provides background of medicine of the period. Chapters on quacks; Mountebanks and medicus; Elizabethan doctors; Sir Thomas Browne and witchcraft; Francis Bacon anatomy and physiology; therapeutics; nervous and mental diseases.

1177

Vierordt, Hermann. Medizinisches aus der Geschichte. Tübingen: Laupp, 1910. 213p.

Short, well-documented study with bibliography.

1178

Yearsley, P. Macleod. Doctors in Elizabethan drama. London: J. Bale, Sons & Danielsson, 1933. 128p.

Brief sketch with chapters on conditions of medical education and practice; doctors as characters: surgeons and apothecaries; midwives and nurses; irregular practitioners.

1179

——Le roy est mort! An account of the deaths of the rulers of England. London: Heritage, [1935]. 163p.

Short sketches, from William the Conqueror through Queen Victoria.

METABOLISM

SEE ALSO Endocrinology

Bibliographies, indexes, abstracts

SEE abstract, review or bibliographic sections of *Metabolism*.

Encyclopedias, guides, handbooks

1180

Carpenter, Thorne M. Tables, factors, and formulas for computing respiratory exchange and biological transformations of energy. 4. ed. Washington: Carnegie Institution of Washington, 1948. 147p. (Carnegie Institution of Washington Publication, 303C.)

A compilation of tables.

1181 ★

Consolazio, C. Frank, Johnson, Robert E., and Marek, Evelyn. Metabolic methods; clinical procedures in the study of metabolic functions. St. Louis: Mosby, 1951. 471p.

Detailed presentation. Well documented.

1182 ★★

Duncan, Garfield G., ed. Diseases of metabolism: detailed methods of diagnosis and treatment. 3. ed. Philadelphia: Saunders, [1952]. 1179p.

Authoritative and comprehensive. Bibliographic citations.

1183

Umbreit, Wayne W. Metabolic maps. Minneapolis: Burgess Pub. Co., [1952]. 419p. Processed.

Applies principles of cartography to biochemical reactions, summarizing widely scattered and unrelated information. Forms also a device for the orderly assembling of useful contemporary information without employing extensive files. Brief bibliographies.

MICROSCOPE

Histories

1184

Clay, Reginald S., and Court, Thomas H. The history of the microscope. London: Griffin, 1932. 266p.

Detailed history through early nineteenth century with list of instrument makers and illustrations.

1185

Nachet, Albert. Collection Nachet. Instruments scientifiques et livres anciens. Notice sur l'invention du microscope et son évolution ... Liste de savants, constructeurs & amateurs du XVI^e au milieu du XIX^e siècle. Paris: Petit, 1929. 145p.

Illustrated catalog, with more information about European contributions than Clay (no. 1184) and Royal Microscopical Society (no. 1186).

1186

Royal Microscopical Society. Origin and development of the microscope, as illustrated by catalogues of the instruments and accessories, in the collections of the ... together with bibliographies of original authorities.

Ed. by Alfred N. Disney in collaboration with Cyril F. Hill and Wilfred E. Watson Baker. Preceded by an historical survey on the early progress of optical science. London: The Society, 1928. 303p.

Lengthy historical account, with useful bibliography and illustrations, and descriptions of microscopes. More information about early history of optics than in Clay (no. 1184) and includes descriptions of microscopes up to time of publication.

MILITARY MEDICINE AND SURGERY

Bibliographies indexes abstracts

1187

Bulletin of War Medicine; Containing Abstracts of Relevant Articles in All Branches of Medicine, Surgery and Kindred Subjects. London, 1–6, 1940–1946.

Published by the Medical Research Council of Great Britain and edited by the staff of the Bureau of Hygiene and Tropical Diseases. Covers foreign as well as the British and American press.

1188

U.S. Armed Forces Medical Library. Reference Division. A bibliography of military medicine relating to the Korean conflict, 1950–1953. Comp. by Charles Roos. Washington: [The Library] 1953. 22 leaves. Processed.

Contains 194 references arranged by subjects: cold injuries, communicable diseases, dentistry, evacuation, naval medicine, psychiatry, wounds.

1189

——— Bibliography of military psychiatry 1947–1952: literature relating to U.S. Armed Forces with selected references relating to British forces. Comp. by Charles Roos. Washington: [The Library] 1953. 39p.

Classified subject arrangement of 545 references.

1190

U.S. Army Medical Library. Reference Division. Foreign military medical serials, 1945–1950. Washington: The Library [1951] 4 lea. ca. Processed.

Lists 68 titles indicating latest volume in library 1950–52 available in typewritten form.

SEE ALSO abstract, review or bibliographic sections of *Bulletin international des services de santé d. armées de terre d. mer et de l'air*; *Deutsche (Der) Militärarzt*; *Revista d. medicina militar* [Rio de Janeiro]; *Revista de la sanidad militar argentina*; *Revue d. Service d. Santé Militaire*; *Voenno-meditsinskii zhurnal*; *War Medicine*

Biographies

1191

Johnston, William. Roll of commissioned officers in the medical service of the British Army who served on full pay within the period between the accession of George II and the formation of the Royal Army Medical Corps, 20 June 1727 to 23 June 1898, with an introduction showing the historical evolution of the corps. Ed. by H. A. L. Howell. Aberdeen: Univ. Pr., 1917. 638p.

Outstanding work of its kind. Excellent for identification of English medical men connected with the army, particularly those not recorded elsewhere. Cites date of army appointment, campaigns, places of service, and date of death. For better known figures, it cites honorary degrees, hospital connections, achievements in medicine, and chief writings. The sketches are extremely brief.

1192

Norske militærlæger 1882–1932. Biografier og billeder. Oslo: Gyldendahl, 1932. 203p.

Short biographies and portraits of Norwegian army doctors.

SEE ALSO *Aux médecins morts* (no. 252); Crawford (no. 1197)

Histories

1193

Adams, George W. Doctors in blue; the medical history of the Union Army in the Civil War. New York: Schuman, 1952. 253p.

With bibliography and statistical tables.

1194

Ashburn, Percy M. A history of the Medical Department of the United States Army. Boston: Houghton, 1929. 448p.

Detailed history through 1928.

1195

Billroth, C. A. Theodor. Historical studies on the nature and treatment of gunshot wounds. Tr. by C. P. Rhoads. New Haven: Nathan Smith Medical Club, 1933. 82p.

Useful sketch. No index.

1196

Cabanès, Augustin. Chirurgiens et blessés à travers l'histoire; des origines à la Croix rouge. Paris: Michel, [1918] 624p.

Comprehensive, illustrated. No index.

1197
Crawford, Dirom G. A history of the Indian Medical Service, 1600–1913. London: Thacker 1914. 2v
Detailed history

1198
Duncan, Louis C. The Medical Department of the United States Army in the Civil War [Washington, 1914] v.p. Repr *Military Surgeon* 1912–13.
Chapters on: Battle of Bull Run Pope's Virginia campaign evolution of the Ambulance Corps and field hospital, Antietam, Fredericksburg: Gettysburg; Chickamauga, Battle of the Wilderness when Sherman marched down to the sea.

1199
—— "Medical men in the American revolution, 1775–1783, *Army Medical Bulletin* (1931) no. 25, p.1–414. Index. [Carlisle Barracks Medical Field Service School, 1937] 18p.
Detailed history with index by C. E. B. Brumbaugh.

1200
Garrison, Fielding H. Notes on the history of military medicine. Washington Association of Military Surgeons, 1922. 206p. Repr *Military Surgeon*, 1921–22.
Short history

1201
Hume, Edgar E. Victories of army medicine; scientific accomplishments of the Medical Department of the United States Army Philadelphia. Lippincott, [1943] 250p.
A useful account of the advances in various fields achieved by the Department. With lists of chiefs of the Department, librarians of the Army Medical Library curators of the Museum, commandants of the Medical Field Service School and of the School of Aviation Medicine. Brief history of the Department since 1775 Lengthy bibliography

1202
McDonald, Donald. Surgeons twoe [*sic*] and barber being some account of the life and work of the Indian Medical Service (1600–1947) London Heinemann, 1950. 295p.
Based on Crawford, brought up to date. With bibliography

1203
Marsel, Albert Q. Miracles of military medicine. New York Duell, Sloan & Pearce, [1943] 373p.
Popular account of twentieth-century contributions.

1204
Major Ralph H. Fatal partners, war and disease. Garden City N.Y.: Doubleday 1941 342p.
Popular history from the Trojan War to the bombing of London, with bibliography

Encyclopedias guides handbooks

From documents based on vast experience gained from treating the wounded and controlling disease during wars, there have been compiled a number of comprehensive reports of various participating military medical services. Since these describe conditions during limited time-periods only they may not be appropriately listed as *histories* of military medicine. However they are monumental in size, each covering its own field in great detail and minutely reflecting the views of its period, so that it serves as valuable information source. Some examples are given here:

Civil War—U S.

U. S. War Department. Surgeon General's Office. The medical and surgical history of the War of the Rebellion (1861–65) Prepared under the direction of Joseph K. Barnes. Washington: Govt. Print. Off., 1870–88. 3 pt. in 6v

World War I

Butler Arthur G., ed The Australian Army medical services in the war of 1914–1918. Melbourne: Australian War Memorial, 1930–43. 3v
Half-title: The official history of the Australian Army medical services in the war of 1914–1918.

Germany Heer Sanitätsinspektion. Sanitätsbericht über das deutsche Heer (Deutsches Feld- und Besatzungsheer) im Weltkriege 1914/1918. Berlin Mittler 1935–38. 2v in 3. (Deutscher Kriegssanitätsbericht 1914/1918.)

Great Britain. War Office. Army Medical Department. History of the Great War based on official documents: medical services [ed. by Sir W. G. Macpherson, *et al.*] General history London. H. M. S. O. 1921 24. 4

—— —— Casualties and medical statistics of the great war London H. M. S. O., 1931 382p

—— —— Diseases of the war London H. M. S. O., [1922] 23. 2v

——— Hygiene of the war London: H. M. S. O., 1923. 2

——— Pathology London H. M. S. O 1923. 600p.

——— Surgery of the war London: H. M. S O., 1922. 2v

MacPhail, Sir Andrew Official history of the Canadian forces in the Great War 1914–19 The medical services. Published by authority of the Minister of N tional Defence, under direction of the General Staff. Ottawa: Ac land, 1925 428p

Mignon, Alfred H. A. Le Service de Santé pendant la guerre 1914–1918. Paris Masson, 1926–27 4

Schjerning, Otto von, ed. Handbuch der ärztlichen Erfahrungen im Weltkriege 1914–1918. Leipzig Barth, 1921–34. 9v in 10.

U.S. War Department. Surgeon General' Office. The Medical Department of the United States Army in the world war Prepared under the direction of M. W Ireland. Washington Govt. Print. Off 1921–29 15 in 17

World War II

Feasby William Richard, ed. Official history of the Canadian medical services 1939–1945 Published by authority of the Minister of National Defence. Ottawa Cloutier 1953+ 2v

V 1 in preparation, will deal with the or ganization, development and military activ ities of the medical services together with the wartime contributions of civilian services. V 2, Clinical subjects.

MacNalty Sir Arthur S., ed. History of the second world war: United Kingdom medical series. London. H. M S O 1952+

The following volumes have been published, nd others are in progress

Clinical volumes: (a) Cope, Sir V Zachary ed. Medicine and pathology London, 1952. 565p. (b) Cope, Sir V Zachary ed. Surgery London, 1953. 772p.

Volumes relati g to th fighting services: ( ) Crew F A. E., ed. The Army medical services administration London, 1953. 1.

Volumes relating to the civilian services ( ) Dunn, Cuthbert L., ed. The emergency medical services. London, 1952–53. 2v (b) MacNalty Sir Arthur S ed. The civilian health and medical services. London, 1953. .1 ( ) Green, Francis H. K., and Covell, Sir Gordon. Medical research. London, 1953. 387p.

Opyt sovetskoi meditsiny Velikoi Otechestvennoi Voine, 1941–1945 gg. [Glavnyi redaktor E. I. Smirnov] Moskva: MEDGIZ, 1949+ 35v in(?)

A detailed account of Soviet medical and surgical experience during World War II. (An excellent review of this has been done by Claudius F Mayer entitled "Medical History of the Russo-German War 1941 1945 brief study with review of the first born official medical history of the Second World War *Military Surgeon 109* (Sept., 1951, 707–21) Volumes not issued in order (v 1, 1951) So far issued: V 1 4 6–10, 12, 23–25 27–29

Walker Allan S. Australia in the war of 1939–45 Series 5 medical. Canberra. Australian War Memorial, [1952+] 4v

V 1 Clinical problems of war (1952) V 2 Middle East and Far East (1953) In preparation: V 3 The Island campaign V 4, Medical services of the R. A. N. and R. A. A. F

The lumes comprising the history of the Medical Department of the United States Army in World War II are divided into two series: (1) The Administrative and Operational Series which constitutes part of the general series of the history of the *U.S. Army in World War II* published under direction of the Office of the Chief of Military History, and (2) The Professional or Clinical and Technical Series, published as *The Medical Department f the United States Army* under the direction of the Office of the Surgeon General. Both series are being prepared by the Historical Unit, Army Medical Service. The following volume of the latter series has been published.

U.S. Army North African—Mediterranean Theatre of Operations. Board for the Study of the Severely Wounded. The physiologic effects of wounds. Washington Office of the Surgeon General, Department of the Army 1952. 376p. (The Medical Department of the United States Army Surgery in World War II.) Based on data accumulated under the rigors of field conditions contains many summarizing tables.

A detailed description of this undertaking has been written by Calvin Goddard, entitled "Current status of U.S Army medico-military history of World War II and of the Korean episode, *Military Surgeon 114* (May 1954) 375–86.

1205

Andrus, Edwin C., ed. Advances in military medicine made by American investigators

Boston Little, Brown, 1948. 2v Paged consecutively 900p. (U.S. Office of Scientific Research and Development. Science in World War II.)

Survey made under the sponsorship of the Committee on Medical Research, U.S. Office of Scientific Research and Development. Extensive bibliography Lists contracts sponsored by the Committee.

1206 * *

Bowers, Warner F ed. Surgery of trauma. Philadelphia Lippincott, [1953] 605p.

An authoritative treatise by 42 contributors, based on experience in World War II and in Korea and written with problems of potential mass injury in mind. Bibliographies.

1207

Entsiklopedicheskii slovar voennoi meditsiny Glavnyi redaktor [ed. by] E. I. Smirnov Moskva: Gosudarstvennoe Izdatel'stvo Meditsinskoi Literatury 1946–48. 5v

Contains more than 100,000 terms explaining all military-medical disciplines from the historical, theoretical and practical point of view Sums up the experiences of World War II. The articles are signed and have bibliographies. Illustrated, including colored plates.

1208

Military medical manual. 7 ed. Harrisburg, Pa. Military Service Pub. Co., [1952] 761p.

Unofficial, but authentic. Especially useful for medico-military history organization of the Army Medical Service, military preventive medicine, and medical aspects of atomic, biologic, and chemical warfare.

1209

U. S. S. R. Glavnoe Voenno-Meditsinskoe Upravlenie Vooruzhennykh Sil SSSR. Atlas ognestrel'nykh ranenii. [Atlas of gunshot wounds.] [Leningrad] Medgiz, 1946+

Appears in 10 pt.

Illustrations in color with text, including case histories refers to wounds encountered in war of 1941–45

MUSIC AND MEDICINE

Histories

1210

Marmelszadt, Willard. Musical sons of Aesculapius. New York Froben Pr., 1946. 112p.

Brief study With brief bibliography

1211

Schullian, Dorothy M., and Schoen, Max. Music and medicine. New York: Schuman, [1948] 499p.

Excellent study with chapters by different authors on the history of music and medicine, medical men who have loved music, occupational diseases of musicians, music as a therapeutic agent, etc. With lengthy bibliography

MYCOLOGY

see Bacteriology mycology parasitology viruses.

NARCOTICS

Bibliographies indexes abstracts

1212

Bulletin on Narcotics. New York, v.1, 1949+

Published by the United Nations, Department of Social Affairs. Includes extensive bibliographies on various drugs and special aspects of narcotic control. The publications of the League of Nations, Health Section, and of the World Health Organization are also useful bibliographic sources.

1213

Meyers, Alan S. Social and psychological factors in opiate addiction review of research findings. [New York] Bureau of Applied Social Research, Columbia Univ 1952. 170p. Processed.

Contains 159 annotated references.

1214

New York Academy of Medicine. Library and Welfare Council of New York City Narcotic addiction, bibliography New York The Council, 1952. 39 leaves. Processed.

Includes books from early years to 1952, articles in journals from 1942–52 only From widely diverse sources.

Encyclopedias, guides handbooks

1215

Terry Charles E., and Pellens, Mildred. The opium problem. New York: Committee on Drug Addictions in collaboration with the Bureau of Social Hygiene, 1928. 1,042p.

A definitive comprehensive review of the world' knowledge, still authoritative.

NAVAL MEDICINE

Bibliographies indexes, obstracts

see abstract, review or bibliographic sections of *Archives de médecine et pharmacie navales*: *Revista de sanidad naval.*

Histories

1216
Allison, Richard S. Sea diseases; the story of a great natural experiment in preventive medicine in the Royal N vy [London] John Bale Medical Publications, [1943] 218p.
Brief study from early times through the nineteenth century With bibliography

1217
Roddis, Louis H. A short history of nautical medicine. New York: Hoeber [1941] 359p.
Reprinted from the *A nals of Medical History* 3 ser 3 (May July September 1941) Includes medicine in the U.S. Navy hospitals for seamen, and hospital ships. With chronology and bibliographic note. N index.

1218
Straus, Robert. Medical care for seamen; the origin of public medical service in the United States. New Ha en Yale Uni Pr 1950. 165p. (Merchant Seaman Studies no. 1.)
History of the Marine Hospital Service in this country from Colonial days to the present, published for the Department of Sociology Yale University Includes public medical services for seamen other countries and other beneficiaries of federal medical services. With bibliographic references.

Encyclopedias guides handbooks

1218.1
U.S. Bureau of Medicine and Surgery. Handbook of the Hospital Corps., United States Na y 1953 Washington Govt. Print. Off 1953 692p. (Its N Med P 5004)
Reference book for hospital corpsmen, as well as an official textbook. Provides information on the history of the Corps, the organization and dministration of Na al medical and dental services, and on medical aspects of atomic, chemical, and biologic warfare, in addition to deta led instruction in first aid, nursing, pharmacology and laboratory procedures.

1218.2
—— The history of the Medical Department of the United States Navy in World War II. Washington Govt. Print. Off 1950–53. 3v (Its NavMed P 5031 P 5021 P–1318)
V 1 (1953) A narr tive nd pictorial olume. V 2 (1953) A compilation of the killed, wounded, and decorated personnel V 3 (1950) The statistics of diseases and injuries.

NEUROLOGY

se Psychiatry and neurology

NOSOLOGY

see Classification of diseases.

NURSING

Bibliographies indexes abstracts

1219
Hirst, Esther M. Lista parcial de libros y textos en castellano para las bibliotecas de las escuelas modernas de enfermeras. Se leccionados por E. M. Hirst Nursing Consultant, Rockefeller Foundation. [p.] 1947 20p Suplemento. 1950. 14p. Processed.
Subject arrangement of books- list of publishers with addresses. Supplement includes list of other material useful for teaching nurses.

1220 * *
National League of Nursing Education. Committee on the Nursing School Library Books suggested for libraries in schools of nursing 4 ed. New York: The League, 1948. 197p.
Useful guide for building up the nursing school library Arranged by broad subject classification. Has list of recommended periodicals and a list of publishers' addresses.

1221 * *
—— Department of Services to Schools of Nursing. Bibliographies on nursing; books, pamphlets, articles, audio- isual aids. New York, 1 1952+
A series of useful annotated lists, each covering special subject. Continues the League' *Book Suggested* (no. 1220) A erage price, $1 to $1 50 each.

see also abstract, review or bibliographic sections of *Danis Nursing Survey Deutsche Schwesternzeitung Nurs g Outlook*

Biographies

1222
Pennock, Meta R., ed Makers of nursing history· portraits and pen ketches of one hundred and nine prominent women. New York Lakeside Pub. Co 1940 142p.
Fairly full, readable, but poorly organized sketches with portraits

1223
Yost, Edna American women of nursing. Philadelphia Lippincott, [1947] 197p.
Ten detailed biographies of women prominent in establishing nursing in America.

Histories

1224
Dock, Lavinia L., Pickett, Sarah E., Noyes, Clara D. *et al.* History of American Red Cross nursing. New York. Macmillan, 1922. 1,562p.
Detailed history

1225
Gibbons, John M., and Mathewson, Mary S. Three centuries of Canadian nursing. Toronto: Macmillan, 1947. 505p.
Comprehensive history with list of religious sisterhood hospitals since 1914. Through World War II.

1226
Goodnow, Minnie. Nursing history. 9. ed. Philadelphia, Saunders, 1953. 440p.
Early editions have title: *Outlines of nursing history*. General illustrated survey textbook for nurses. With material not included in earlier editions. Has list of training schools, U. S. 1861–1889, references, chronology. The same author's *Nursing history in brief*, 3. ed. (Philadelphia: Saunders, 1950) 274p., is a condensed version of this text.

1227
Jamieson, Elizabeth M. and Sewall, Mary F. Trends in nursing history: their relationship to world events. 3. ed. Philadelphia: Saunders, 1949. 632p.
Chronologic story with emphasis on events rather than people. Chapters on national surveys, World War II, international relationships, nursing and economics. Illustrated textbook.

1228
Nutting, M. Adelaide, and Dock, Lavinia L. A history of nursing. New York: Putnam, 1907–12. 4v.
Exhaustive history

1229
Pavey, Agnes E. The story of the growth of nursing. [3. ed.] London: Faber & Faber [1951]. 496p.
Particularly useful for early history of hospitals and care of the sick.

1230
Robinson, Victor. White caps; the story of nursing. Philadelphia: Lippincott, [1946]. 425p.
Readable, chronologic history through World War II with chapter on statistics of distribution of nurses and licensing. Useful bibliography.

1231
Sellew, Gladys, and Nuesse, Celestine J. A history of nursing. 2. ed. St. Louis: Mosby, 1951. 439p.
Textbook for students with emphasis on American nursing and a summary of recent nursing trends outside the United States.

1232
Seymer, Lucy R. B. A general history of nursing. 2. ed. New York: Macmillan, 1949. 332p.
Particularly useful for recent years. Bibliography and helpful appendixes which include a list of nursing magazines of a national character, national associations by country and legal requirements of candidates for registration in England, France, New York, New Zealand, and Prussia.

Encyclopedias, guides, handbooks

1233 *
American Nurses Association. Nursing Information Bureau. Facts about nursing; a statistical summary. 1952 edition. New York: The Association, [1953(?)]. 112p.
Five other nursing organizations collaborated with the Association in the preparation of this compact book full of useful information. Covers distribution of nurses, nursing education, placement, specialized nursing, practical nurses and nurses aids, and nurses in other countries. Annual.

Directories

1234
National League of Nursing Education. State-approved schools of nursing: schools meeting minimum requirements set by law. New York: The League, 3+ 1918+
V.1–2 not published.
Revised every four years. Arranged by state, with information concerning each school.

Dictionaries

1235
Morten, Honnor. The nurse's dictionary with phonetic pronunciations. 22. ed. by Florence Taylor. London: Faber & Faber, 1951. 394p.
Less comprehensive than Price (no. 1238). Information regarding British usage. Appendixes I–VI have practical information on first aid, tests, and recipes not included in Price.

1236
Pearce, Evelyn C. Medical and nursing dictionary and encyclopaedia. 11. ed. London: Faber & Faber, 1953. 621p.

Ready reference work to aid nurse in emergency situations.

1237

Petry, Lucile, ed. The encyclopedia of nursing. Philadelphia: Saunders, 1952. 1,011p.

Dictionary with some notations of encyclopedic proportions. Approach quite different from that of the British Pearce (no. 1236). Useful tables included.

1238

Price, Alice L. The American nurses dictionary: the definition and pronunciation of terms in the nursing vocabulary. Philadelphia: Saunders, 1949. 656p. Suppl. 101p.

Especially written for nurses. Approximately 25,000 terms. The supplement is for teachers.

NUTRITION

SEE Food and nutrition.

OBSTETRICS AND GYNECOLOGY

Bibliographies, indexes, abstracts

1239

Berichte über die gesamte Gynäkologie und Geburtshilfe, sowie deren Grenzgebiete. Berlin, 1- 1923+

Up to date and comprehensive. The references abstracted here were also published as a subject bibliography in *Jahresbericht Gynäkologie* (no. 1240). Suspended 1944-51.

1240

Jahresbericht Gynäkologie und Geburtshilfe. Berlin, 1-51, 1887-1937.

Title varies. Originally a review and abstract journal. Later volumes, chiefly subject bibliographies (SEE note above for *Berichte* [no. 1239]).

1241

Kinnunen, Olavi, and Nieminen, Kalevi. "The obstetrical and gynaecological literature published in Finland from 1901-1950," *Medicina Fennica* (1951) Suppl. 1. 118p.

1241.1

Rassegna bibliografica della stampa ostetrico-ginecologica. Roma, 1- 1949+

Selected abstracts in Italian of the world's literature in this field.

1242

U.S. Women's Bureau. Bibliography on maternity protection. Washington: The Bureau, 1951. 53p. Processed.

Annotated bibliography. International in scope.

SEE ALSO *Abstracts of World Medicine* (no. 82); *Excerpta medica* (no. 90) Section X; *International Abstracts of Surgery* (no. 1786); *Japanese Journal of Medical Sciences* (no. 120K); *Sovetskoe meditsinskoe* (no. 130A); *Tsentral'nyi* (no. 131) Serila V; *Year Book of Obstetrics and Gynecology* (no. 143 I).

SEE ALSO abstract, review, or bibliographic sections of *American Journal of Obstetrics and Gynecology*; *Bulletin de la Fédération des Sociétés de Gynécologie et d'Obstétrique de Langue Française*; *Cirugía ginecol gía y urología*; *Geburtshilfe und Frauenheilkunde*; *Gynaecologia*; *Journal of Obstetrics and Gynaecology of the British Empire*; *Obstetricia y ginecología latinoamericanas*; *Revue française de gynécologie et d'obstétrique*; *Zentralblatt für Gynäkologie*.

Reviews

1243 ★

Obstetrical and Gynecological Survey. Baltimore, 1- 1946+

Bimonthly. Reviews and digests of current literature. Selective coverage, chiefly of the usual English language journals.

Biographies

1244

American Gynecological Society. Album of the fellows, 1876-1930. Floyd Elwood Keene, ed. Philadelphia: Dornan, 1930. 640p.

Good biographies, portraits, and facsimile signatures of all the Society's fellows from its organization; also officers and founders. Some are obstetricians. Out of print.

1245

Deutsches Gynäkologen-Verzeichnis: wissenschaftlicher Werdegang und wissenschaftliches Schaffen deutscher Gynäkologen. Hrsg. von Walter Stoeckel ... bearb. von Friedrich Michelsson. 2. Aufl. Leipzig: Barth, 1939. 581p.

Biographies of contemporary German gynecologists, with bibliographies. The first edition, 1928, came out as a supplement to the *Zentralblatt für Gynäkologie* under the title of *Deutscher Gynäkologen Kalender*.

1246

Viana, Odorico, and Vozza, Francesco. L'ostetricia e la ginecologia in Italia. Nuova ed. ... de "L'Italia ostetrica" del prof. A. Guzzoni degli Ancarani. Milan: Società Italiana di Ostetricia e Ginecologia, 1933. 1,191p.

Biographies of contemporary Italian obstetricians and gynecologists, arranged under their institutions, with an historical sketch of the latter. Little personal data given except date of birth. Bibliographies included. Subject index to the bibliographies.

Histories

1247

Das, Kedarnath. Obstetric forceps; its history and evolution. Calcutta: Art Pr 1929 903p.
Detailed, illustrated history with bibliography

1248

Diepgen, Paul. "Die Frauenheilkunde der alten Welt. In Stoeckel, Walter ed. *Handbuch der Gynäkologie* 3. Aufl. München, 1937 v.12[1] p.1–348.
Well-documented study

1249

Fasbender Heinrich. Geschichte der Geburtshülfe. Jena: Fischer 1906. 1,028p.
Exhaustive history called by Garrison the most valuable on the subject.

1250

Findley Palmer Priests of Lucina; the story of obstetrics. Boston: Little, 1939. 421p.
Readable history with bibliography

1251

Flack, Isaac H. Eternal Eve; the history of gynaecology & obstetrics. Garden City N.Y Doubleday 1951. 696p.
Popular account, with brief bibliography Author pseudonym: Harvey Graham.

1252

Ingerslev Emmerich. Fragmenter af fødselshjælpens historie. Kjøbenhavn: Gyldendalske Boghandel, 1906–07 2v
Illustrated survey through eighteenth century

1253

Jameson, Edwin M. Gynecology and obstetrics. New York: Hoeber 1936. 170p (Clio medica, no. 17)
With bibliography

1254

La Torre, Felice. L'utero attraverso i secoli. Città di Castello Unione Arti Grafiche, 1917 831p.
Exhaustive, illustrated history with bibliography

1255

Leonardo, Richard A. History of gynecology New York. Froben Pr 1944. 434p.
Not as comprehensive and detailed as Ricci. Through the nineteenth century With bibliography

1256

McKay William J S. The history of ancient gynaecology New York. Wood, 1901. 302p.
Early history through the Arabian writers.

1257

Müllerheim, Robert. Die Wochenstube in der Kunst. Stuttgart: Enke, 1904. 244p.
Well illustrated.

1258

Ricci, James V The development of gynaecological surgery and instruments from the Hippocratic age to the antiseptic period. Philadelphia: Blakiston, 1949 594p.
Well-illustrated, well-documented study comprehensive and detailed.

1259

—— The genealogy of gynaecology history of the development of gynaecology through the ages, 2000 B.C.–1800 A.D. with excerpts from the many authors. 2. ed. Philadelphia Blakiston, 1950. 494p.
Excellent detailed history with translated excerpts, biographies, and bibliography Bibliographic errors in first edition corrected in this.

1260

—— One hundred years of gynaecology 1800–1900 with summaries and case reports of all diseases pertaining to women. Philadelphia. Blakiston, [1945] 651p
Index of contributions arranged by subject with extensive bibliographic references. For reference rather than reading.

1261

Siebold, Eduard C J von. Essai d'une histoire de l'obstétricie. Traduit avec additions par F J Herrgott. Paris. Steinheil, 1891–93. 3v
Exhaustive history for the most part superseded by Fasbender

1262

Spencer Herbert R. The history of British midwifery from 1650 to 1800- the Fitz-Patrick lectures for 1927 delivered before the Royal College of Physicians of London. London J Bale, Sons & Danielsson, 1927 185p.
With biographies and list of British lying-in institutions and their staffs.

1263

Thoms, Herbert K. Chapters in American obstetrics. Springfield, Ill., Thomas, 1933. 90p
Brief sketch.

1264
Thoms, Herbert K., ed. Classical contributions to obstetrics and gynecology Springfield, Ill.: Thomas, [1935] 265p.
Excerpts from original writings, with biographies and bibliography

1265
Usandizaga, Manuel. Historia de la obstetricia y de la ginecologia en España. Santander: Aldus, 1944. 361p.
Through the eighteenth century with brief sketch of the nineteenth. Interesting illustrations, bibliography of Spanish books through 1800 and of histories

1266
Weindler Fritz Geschichte der gynäkologisch-anatomischen Abbildung Dresden Zahn & Jaensch, 1908. 186p.
Valuable for its illustrations, some in color Through the eighteenth century

1267
Witkowski, Gustave J. A. Histoire des accouchements. Paris Steinheil, [1887] 714p. Appendix L'arsenal obstétrical. 182p.
Extensive work, profusely though not well illustrated. Inadequate index. Chapters on errors and superstitions, monsters, primitive customs, etc.

1268
Young, John H Caesarean section the history and development of the operation from earliest times London. Lewis, 1944 254p.
Very useful history with bibliography Edinburgh M.D. thesis.

Encyclopedias, guides handbooks

1269 *
Davis, Carl H., ed. Gynecology and obstetrics. Hagerstown, Md. Prior 1934+ 3v and index
Comprehensive, useful, loose-leaf system Good illustrations.

1270
Mahfouz, Naguib P Atlas of Mahfouz Obstetric and Gynaecological Museum. Altrincham, England J Sherratt, [1949] 3v
Valuable pathologic files of over 1,300 mounted specimens. Photographs and sketches, many in color Legends often in five languages. Discussion includes historical reviews and operative procedures.

1271
Ploss, Hermann Heinrich, Bartels, Maximilian C. A., and Bartels, Paul R. A. Woman. an historical, gynaecological, and anthropological compendium. Ed. by Eric John Dingwall. St. Louis Mosby 1935 3v
Based on Ploss and Bartels Das Weib in der Natur- und Völkerkunde anthropologische Studien which was first issued in 1885, with 11 ed. in 1927 This is the first English translation and does not follow exactly the text of any German edition. Invaluable for gynecologic and obstetric folklore. Beautifully documented and illustrated.

1272
Postoloff Anthony V and Nichols, David H. Atlas of gynecologic pathology color film library and descriptive manual. Baltimore Williams & Wilkins, 1952. 74p. and 100 Kodachrome slides.
Text comments. Projector (35mm.) needed for slides.

1273
Seitz, Ludwig, and Amreich, Alfred I eds. Biologie und Pathologie des Weibes; ein Handbuch der Frauenheilkunde und der Geburtshilfe. 2. Aufl. Berlin Urban & Schwarzenberg, 1941+ 10v
Replaces Halban and Seitz work. Appears in Lieferungen. General section in 3 Gynecology 3 Obstetrics, 4 Very complete Includes female reproductive anatomy and physiology and a good historical survey excellent bibliographies. Illustrated; many plates in color Not yet complete.

1274 *
Titus, Paul. Atlas of obstetric technic. 2. ed. St. Louis. Mosby 1949 197p.
Contains 203 figures, pen and ink sketches, with brief commentaries. Some gynecologic procedures illustrated.

Dictionaries

1275
Taber Clarence W and Castallo, Mario A. Taber's dictionary of gynecology and obstetrics. Philadelphia Davis, 1944. 1v Paged separately for each letter
Some definitions and descriptions encyclopedic in scope.

1276
Worsell, Emily K. Baillière's midwives' medical dictionary London Baillière, Tindall & Cox, 1951 296p.
Illustrated pocket dictionary not nearly so comprehensive as Taber and Castallo (no. 1275) Appendix I–XXXV of value to the British midwife.

OCCUPATIONAL THERAPY

see Rehabilitation and occupational therapy

OPHTHALMOLOGY

Bibliographies indexes abstracts

1277

Abstracts on Military and Aviation Ophthalmology and Visual Sciences. Washington: Biological Sciences Foundation, 1953+ 3

Edited by Conrad Berens and L. Benjamin Sheppard. V 1 covers the literature from early times through 1940; v 2, 1941–45. Detailed alphabetic subject arrangement. Foreign language titles are in original and translation. V 3, 1946–52, in preparation, will contain author and subject indexes.

1278

American Foundation for the Blind. Books about the blind: bibliographical guide to literature relating to the blind by Helga Lende. [2. ed.] New York: The Foundation, 1953. 357p.

Includes 4,000 annotated book and periodical entries, arranged by subject.

1279

Centralblatt für praktische Augenheilkunde. Leipzig, 1–43 1877–1919

V 5–43 have yearly supplements. Abstract journal, superseded by no. 1284

1280

Fulton, John F., Hoff, Phebe M., and Perkins, Henrietta T. A bibliography of visual literature 1939–1944. [Springfield, Ill., Thomas] 1945. 117p. (Yale University School of Medicine. Library. Historical Library Publication no. 11)

Classed arrangement. Published by the Committee on Medical Research and Development, U.S. Office of Scientific Research and Development; prepared by the Committee on Aviation Medicine of the National Research Council. Partially duplicated and supplemented by U.S. Library of Congress Reference Department. *Visibility: bibliography* compiled by Jack Weiner and Morris C. Leikind and edited by Jack R. Gibson (Washington: The Library 1952) 90p.

1281

Jahresbericht Ophthalmologie: bibliographisches Jahresregister des Zentralblattes für die gesamte Ophthalmologie und ihre Grenzgebiete. Tübingen; Berlin, 1–63, 1870–1938.

V 1–44, 1870–1913, as *Jahresbericht über die Leistungen und Fortschritte im Gebiete der Ophthalmologie*; 45 and 46 have title: *Nagel-v. Michel'scher Jahresbericht Ophthalmologie*; 47–53 as *Jahresbericht über die gesamte Ophthalmologie*. Classified bibliography. Through v 44, it was a review journal with an annual bibliography; v 45–46, abstracts only; 47–54 review journal with lengthy bibliographies. Became supplement to *Zentralblatt ... Ophthalmologie* (no. 1284) with 47 listing what is abstracted there.

1282

Ophthalmic Literature. London, 1, 1947+

Published by the *British Journal of Ophthalmology*. Good abstracts, classed arrangement. Titles both in English and in original language.

1283

Rucker, Charles W., and Keys, Thomas E. The atlases of ophthalmoscopy 1850–1950. [Rochester, Minn. 1950.] 33p.

Bibliography: An exhibit prepared for the Section on Ophthalmology, American Medical Association meeting, 1950. Arranged chronologically and also by author; brief annotations and holdings of some libraries.

1284

Zentralblatt für die gesamte Ophthalmologie und ihre Grenzgebiete: zugleich Referatenteil des Archiv für Augenheilkunde. Berlin, 1, 1914+

Continues *Jahresbericht über die Leistungen und Fortschritte im Gebiete der Ophthalmologie*, 1–44, 1870–1913. Supersedes *Centralblatt für praktische* (no. 1279). Comprehensive classified abstract journal. Good for foreign literature. Has annual bibliographic supplement: *Jahresbericht Ophthalmologie* (no. 1281). Suspended 1944–July 1948.

For ophthalmological journals, see International Ophthalmological Council (no. 1291)

See also *Excerpta medica* (no. 90) Section XII; *Japanese journal of Medical Sciences* (no. 1207); *Sovetskaia meditsina* (no. 1300); *Tsentral'nyi* (no 131) Seriia V; *Year Book of the Eye Ear Nose and Throat* (no. 1430)

See also abstract, review or bibliographic sections of *American Journal of Ophthalmology*, *Annales d'oculistique*, *Archives d'ophtalmologie*, *Giornale italiano di oftalmologia*, *Klinische Monatsblätter für Augenheilkunde*, *Ophthalmologia ibero-americana*, *Sight Saving Review*

Reviews

1285

Documenta ophthalmologica. Zurich, v 1 1938+

Extensive reviews in French, German and English comparable to the *Ergebnisse*. Good bibliographies.

1286

Fortschritte der Augenheilkunde. Advances in Ophthalmology. Progrès d'ophtalmologie. Basel, v 1 1952+ (Bibliotheca ophthalmologica, Fasc. 36+)

Critical review articles, with bibliographies. Articles in English, French, or German.

1287

Modern trends in ophthalmology [1] ed. by Frederick Ridley and Arnold Sorsby London Butterworth, 1940. 699p. V 2, ed. by Arnold Sorsby 1948. 600p.

Designed to bridge the gap between the textbook and the "ferment found in the periodical literature. Contributions by internationally known specialists. Well illustrated, selected bibliographies.

1288

Ophthalmic Yearbook. Denver 1-23 1903-27

V 14-15 issued as supplements to *American Journal of Ophthalmology*. V 16-18 entitled *Ophthalmic Literature*. A valuable review of the literature with good bibliographies and biographies. Continued as the Abstract Department of the *American Journal of Ophthalmology*

1289 * *

Progress in Ophthalmology and Otolaryngology. Quadrennial Review New York, v 1 1957+

Pt. I Ophthalmology Pt. II Otolaryngology available separately (latter entitled *Progress in Otolaryngology*). Continues in part *Ophthalmology the War Years* which covered literature from 1940 to June, 1946 1952 volume reviews literature from July 1946 to 1952.

Biographies

1290

Blue book of optometrists a register of legally qualified optometrists of the United States, Alaska, Cuba, Hawaii, Puerto Rico, Canada, Mexico. Chicago, 1 1912+

Lists also optical supply houses, manufacturers, importers and school of optometry. Optometrists listed by state with state laws governing practice. Latest issue is 21 ed., 1952.

1291

International Ophthalmological Council Index ophthalmologorum. 4. ed. Lugduni Batavorum apud Stenfert Kroese Societatem Editoriam, [1954] 370p.

Biographic directory of ophthalmologists by country. Contains also under each country: directories of ophthalmologic periodicals, societies, hospitals, institutions and schools. For ophthalmologists, SEE ALSO Wood (no. 1315)

SEE ALSO American Medical Association (no. 278); *Directory of Medical Specialists* (no. 281)

Histories

1292

Chance, Burton. Ophthalmology New York: Hoeber 1939. 240p. (Clio medica, no. 20)

1293

Duyse, Marnix van. Coup d'oeil sur l'histoire de l'ophtalmologie en Belgique au XIX^e siècle. Gand: Hoste, 1912. 291p.

Chapters on military ophthalmic organizations and teaching; biographies; list of publications, 1800-1901

1294

Hirschberg, Julius. "Geschichte der Augenheilkunde. In *Graefe-Saemisch Handbuch der gesamten Augenheilkunde* 2. Aufl. Leipzig, 1899-1918. v.12-15 (4v in 10)

Exhaustive, well-documented history. Difficult index: numbers sometimes refer to sections, sometimes to pages.

1295

Hubbell, Alvin A. The development of ophthalmology in America, 1800-1870. Chicago American Medical Association, 1908. 197p.

Short sketch, with biographies.

1296

James, Robert R. Studies in the history of ophthalmology in England prior to the year 1800 Cambridge: Univ Pr 1933. 255p.

Historical sketches which had for the most part appeared in the *British Journal of Ophthalmology*

1297

Magnus, Hugo. Die Augenheilkunde der Alten. Breslau J Kern, 1901. 691p.

Exhaustive, well-documented study from earliest times through Paul of Aegina.

1298

Sorsby Arnold. A short history of ophthalmology 2. ed. London Staples Pr [1948] 103p.

Earlier editions in Short History Series.

Encyclopedias, guides, handbooks

1299 * *

Arruga, Hermenegildo. Ocular surgery translated from the third Spanish edition by

Michael J Hogan and Lula E. Chaparr New York: McGraw-Hill, 1952. 936p.

Comprehensive coverage by concise, practical descriptions of technique. Magnificently illustrated by 1,293 drawings, half-tones, and colored illustrations. A monumental contribution. Extensive bibliographies emphasize the European literature.

1300 * *

Berens, Conrad, ed. The eye and its diseases; by 92 international authorities. 2. ed. Philadelphia. Saunders, 1949. 1,092p.

Incorporates recent advances in knowledge; comprehensive.

1301 *

Berens, Conrad, and Siegel, Edward. Encyclopedia of the eye; diagnosis and treatment. Philadelphia: Lippincott, [1950] 272p.

Ready reference work with drugs used listed under therapeutics.

1302

Berliner Milton L. Biomicroscopy of the eye; slit lamp microscopy of the living eye. New York: Hoeber [1943–49.] 2v

Examination of the normal and diseased eye, with descriptions of pathologic conditions; 512 illustrations and 40 plates in color Extensive bibliographies.

1303 * *

Duke-Elder Sir William S Textbook of ophthalmology London Kimpton, 1932–54. 7v

This extensive survey constitutes the best ophthalmologic reference work since Wood' *American encyclopedia* (no 1315) Distinctly not textbook but reference work. There was a second impression of 1 in 1938 with certain changes. In 3 the references to this volume have two sets of page numbering, one referring to the 1932 impression, the other to the 1938. V 7 contains summary and index. Indispensable for the ophthalmologist.

1304 * *

Friedenwald, Jonas S *et al.* Ophthalmic pathology; an atlas and textbook. Philadelphia Saunders, 1952. 489p.

Under the joint sponsorship of the American Academy of Ophthalmology and Otolaryngology and the Armed Forces Institute of Pathology The pathogenesis and morphologic pathology of eye diseases, with over 200 black-and-white photographs of material from the Institute Registry of Ophthalmic Pathology Extensive bibliographies Approach different from Samuels and Fuchs (no. 1309) where illustrations are drawings and many colored plates.

1305

Graefe-Saemisch Handbuch der gesamten Augenheilkunde; unter Mitwirkung von T Beer [*et al.*] hrsg. von Theodor Saemisch. 2. Aufl. Leipzig: Engelmann, 1898–1939. 15v in 42. Suppl. 1911 169p.

One of the most exhaustive and authoritative works. A third edition of some volumes has been issued.

1306

Helmholtz, Hermann L. von. Helmholtz's treatise on physiological optics. T from the 3. German ed. Ed. by J P C. Southall. [Menasha, Wis.] Optical Society of America, 1924–25 3v

A modernized translation of his *Handbuch der physiologischen Optik*, published 1909–11. Still a fundamental reference work.

1307

Kronfeld, Peter C., McHugh, Gladys, and Polyak, Stephen L. The human eye in anatomical transparencies. Rochester N.Y Bausch & Lomb Pr 1943. 99p.

Contains 34 transparency paintings, an illustrated anatomic description of the eye, and history of its structure nd function.

1308 * *

Polyak, Stephen L. The retina the anatomy and the histology of the retina in man, ape, and monkey including the consideration of isual functions, the history of physiological optics and the histological laboratory technique. Chicago: Univ of Chicago P [1941] 607p. with an Appendix of 100 illustrations and accompanying text.

The most exhaustive study of the retina; bibliography

1309

Samuels, Bernard, and Fuchs, Adalbert G Clinical pathology of the eye practical treatise of histopathology New York: Hoeber [1952] 420p.

Contains 418 illustrations, 191 in color Brief text. No bibliography

1310

Schieck, Franz, and Brückner, Arthur eds. Kurzes Handbuch der Ophthalmologie. Berlin Springer 1930–32. 7

Covers every aspect of ophthalmology Good illustrations and bibliographies.

1311

Steindorff, Kurt, *et al* eds. "Oculus, *Tabulae biologicae* 22 (1947 51) pt. 1 2.

Presents exhaustive data, mostly in tabular form, on both the human and the animal eye. Covers physical measurements, chemistry embryology anatomy physiology and physics.

1312
Traité d'ophtalmologie, publié sous les auspices de la Société Française d'Ophtalmologie ... René Onfray secrétaire général. Paris Masson, 1939 8v
Covers whole subject very extensively Profusely illustrated. Excellent bibliographies. Out of print.

1313
Vogt, Alfred. Handbook and atlas of the slit lamp microscopy of the living eye. New York: Hafner Pub. Co., 1947 V 3 (all that was published)
Covers iris, vitreous body conjunctiva. Very comprehensive work with many illustrations. Translated from 2. German edition. Expensive, but one of the most important works on this subject.

1314 *
Wilmer William H. Atlas fundus oculi. New York Macmillan, 1950. 100 color plates and 39 pages + 55 leaves of explanatory text.
One of the best modern reference atlases on the fundus of the eye. Unchanged re-issue of 1934 edition.

1315
Wood, Casey A. ed. The American encyclopedia and dictionary of ophthalmology Chicago Cleveland Pr 1913–21 18v
While not up to date, it is important, especially for the history of the subject. Includes numerous biographies of ophthalmologists of all nations, many of which are not available elsewhere Out of print.

Directories

1316
American Foundation for the Blind Directory of activities for the blind in the United States and Canada including prevention of blindness organization and sight saving classes New York 1926+
Edited by Helga Lende Includes public and private agencies arranged by state giving full information. Biennial since 1938 Last ed. 1952, 134p First edition entitled, *Agencies for the blind in America.*

1317
"Directory of ophthalmologic and otolaryngologic societies *Transactions of the American Academy of Ophthalmology and Otolaryngology* 57 (1953) no. 1 p.xxxiii–xlı.
International, national, and foreign societies.

SEE ALSO American Medical Association (no. 278) *Directory of Medical Specialists* (no 281)

Dictionaries

1318
Atkinson, Thomas G Oculo-refractive cyclopedia and dictionary 3. ed. Chicago: Professional Pr 1944. 388p.
Specialized dictionary some of the descriptions encyclopedic. Good definitions.

1319
Goldman, Max R. Ophthalmic glossary Pittsburgh. Rimbach Associates, 1952. 40p
For the general practitioner medical secretary optician, optometrist, and the laity; 2,000 terms, old and new

1320
Hardy William E., *et al.* A dictionary for opticians and optometrists. London Hatton Pr 1951 159p.

1321
Kerney Ellen. A glossary of French medical terms referable to the eye. New York Columbia Univ Institute of French Studies, 1934. 209p.
A practical and useful book for the specialist and translator Authorities for definitions are given. Copies available free apply to the New York Academy of Medicine Library

1322
Slutzky Jerome P The optometrist' dictionary Dayton, O Optometric Pr [1949] 295p.
Useful glossary with pronunciation and definitions. Lists abbreviations.

ORTHOPEDICS

SEE ALSO Rehabilitation and occupational therapy Surgery Therapeutics, physical.

Bibliographies Indexes abstracts

1323
Bibliografia ortopedica Bologna, 1 24, 1920–41
Supplement to *Chirurgia degli organi di movimento* Abstracts in Italian. Titles in original language with Italian translation. Includes abstracts of papers of congresses and societies.

1324
Orthopädische (Die) Weltliteratur ... bearb. und hrsg von August Blencke und Hermann Gocht. 1903–1930 Stuttgart: Enke, 1936. 2v Supplement, 1931–35 1938. 842p.
Continues Albert Hoffa and August Blencke *Die Orthopädische Literatur* Stuttgart, 1905 In conjunction with this, it covers the orthopedic literature from its beginning

through 1935 Issued under the auspices of the Deutsche Orthopädische Gesellschaft and the Deutsche Vereinigung für Krüppelfürsorge. Classified by subject. No author index. Supplement volume edited by Erich Witte.

SEE ALSO *Ergebnisse der Chirurgie und Orthopädie* (no 1795); *Excerpta medica* (no. 90) Section IX; *International Abstracts of Surgery* (no. 1786) *Japanese Journal of Medical Sciences* (no. 120 I); *Sovetskoe medits skoe* (no. 130E), *Tsentral'nyi* (no. 131) Serfia V *Wiederherstellungschirurgie und Traumatologie* (no. 1796), *Year Book of Orthopedics and Traumatic Surgery* (no. 143J)

SEE ALSO abstract, review or bibliographic sections of *Journal of Bone and Joint Surgery Revue d'orthopédie et de chirurgie de l'appareil moteur Zeitschrift für Orthopädie Zeitschrift für orthopädische Chirurgie*

Histories

1325

Bick, Edgar M. Source book of orthopaedics. 2. ed. Baltimore: Williams & Wilkins, 1948. 540p.

Pt. 1, p.1 88, devoted to chronologic history through eighteenth century Pt. 2 contemporary orthopedic surgery and its recent sources, including mechanical, physical, manipulative, and drug therapy; and the rise of orthopedic hospitals and institutions. With bibliography and list of journals. Early edition has title *History and source book of orthopaedic surgery*

1326

Half century of progress in orthopaedic surgery *Journal of Bone and Joint Surgery* 32-B (1950) 451–40

Chapters by different authors on orthopedic surgery in the United States, continental Europe, Canada, Australia, New Zealand, South Africa, Southern Rhodesia, Great Britain. W ll illustrated.

1327

Keith, Sir Arthur Menders of the maimed the anatomical & physiological principles underlying the treatment of injuries to muscles, nerves, bones, & joints. London H. Frowde, Hodder & Stoughton, 1919 335p.

Includes chapters on orthopedic principles and practice of John Hunter John Hilton, Hugh Owen Thomas; introduction of tenotomy; Marshall Hall nd his discov eries; and Duchenne of Boulogne.

SEE ALSO Charcot (no. 707)

Encyclopedias, guides handbooks

1328

American Academy of Orthopaedic Surgeons. Orthopaedic appliances atlas. Ann Arbor Mich., Edwards, 1952+ V.1, 588p. Double columns.

Comprehensive work. Published in cooperation with the Office of the Surgeon General of the Army and the Veterans Administration. Every detail of manufacture and application of braces, splints, and shoes portrayed by 945 graphic illustrations. Anatomic relationships shown.

1329

Bancroft, Frederic W and Marble, Henry C., eds. Surgical treatment of the motor-skeletal system. 2. ed. Philadelphia Lippincott, [1951] 2

Surgical procedures necessitated by trauma, tumor deformity or any other disease.

1330 ★

Colonna, Paul C. Regional orthopedic surgery Philadelphia: Saunders, 1950. 706p.

Concerns the physiologic function of the musculoskeletal system as well as the prevention, correction, and surgical treatment of injuries, diseases, and anomalies of this system.

1331

Ombrédanne, Louis, and Mathieu, Paul A., eds. Traité de chirurgie orthopédique. Paris Masson, 1937 5v

Comprehensiv and profusely illustrated. Out of print.

SEE ALSO Banks (no. 1828); Slocum (no 1841); *Traité de médecine* (no. 519) XVII

Directories

1332

American Board for Certification of the Prosthetic and Orthopedic Appliance Industry Official registry of certified firms and fitters who make and fit prosthetic and orthopedic appliances, 1951 [Washington The Board, 1951(?)] [44]p.

Geographic arrangement.

SEE ALSO *Directory of Medical Specialists* (no. 281)

OTO RHINO LARYNGOLOGY

For broncho-esophagoscopy SEE ALSO Gastroenterology

Bibliographies indexes, abstracts

1333

Airkem, Inc. Odors and the sense of smell; a

bibliography 320 B.C.–1947 New York: Alkern, Inc., 1952. 342p.

A useful classified bibliography, from widely scattered sources; includes odor control and water pollution from public health standpoint, and much of anatomic and physiologic interest.

1334

Arcila, Ricardo, and Jahn, Franz C. Bibliografía otorrinolaringológica venezolana hasta 1950. Caracas: Editorial Bolívar, 1951 69p.

Includes historical survey References listed under both authors and subjects.

1335

Harvard University Psycho-Acoustic Laboratory A bibliography in audition. [Comp. by George A. Miller and others.] Cambridge, Mass. Harvard Univ Pr [1950] 2v Processed.

Author-list of 5,500 references, comprehensive coverage for 1938–48 and "reasonably complete for pre 1938 literature. Supplement A, in v.2, includes some 1949 references. Section on "Classification by subject cumbersome to use.

1336

Internationales Centralblatt für Laryngologie, Rhinologie und verwandte Wissenschaften. Berlin, v.1–38 1884–1922.

Abstract journal containing also proceedings of societies. Superseded by no. 1337

1337

Zentralblatt für Hals- Nasen- und Ohrenheilkunde. Berlin, v 1 1922+

Supersedes no. 1336. Published by the Gesellschaft Deutscher Hals- Nasen- und Ohrenärzte. Comprehensive abstract journal, especially good for foreign literature. The references abstracted here were also published in 1922–33 as classified bibliography *Jahresbericht Hals- Nasen- und Ohrenheilkunde* (previously entitled *Bibliographie der Hals- Nasen- und Ohrenheilkunde*) Suspended 1944–47

SEE ALSO *Excerpta medica* (no. 90) Section XI; *Japanese Journal of Medical Sciences* (no. 120L) *Sovetskoe meditsinskoe* (no 130B) *Tanulmány* (no. 131) Series V *Year Book of th E; Ear Nose and Throat* (no. 143D)

SEE ALSO abstract, review or bibliographic sections of *Annales d'otolaryngologie Archives of Otolaryngology Hals- Nasen- und Ohrenarzt* (review and abstract section [Teil II] formerly entitled "Internationales Zentralblatt für Ohrenheilkunde und Rhino-Laryngologie [Folia oto-laryngologica II]) *Journal of Speech and Hearing Disorders Zeitschrift für Laryngologie Rhinologie Otologie*

Reviews

1338

Fortschritte der Hals-Nasen-Ohrenheilkunde. Advances in oto-rhino-laryngology Progrès en oto-rhino-laryngologie. Basel, v 1, 1953+ (Bibliotheca Oto-Rhino-Laryngologica. Supplementa ad Practica Oto-Rhino-Laryngologica Fasc. 1+)

Critical review articles with bibliographies. The three articles in v 1 are in German, one has a short English summary Each volume is devoted to a theme, that of v 1 being the vestibular apparatus (Gleichgewichtsapparat)

SEE ALSO *Progress in Ophthalmology and Otolaryngology* (no. 1289) Pt. II, Oto-laryngology

Histories

1339

Chauveau, Claude. Histoire des maladies du pharynx. Paris Baillière, 1901–06. 5v

Exhaustive history through 1873. No index, but detailed table of contents. Useful "Index bibliographique.

1340

Kassel, Karl. Geschichte der Nasenheilkunde von ihren Anfängen bis zum 18. Jahrhundert. Bd. 1 Würzburg: Kabitzsch, 1914 476p.

Detailed history with bibliography Continued through the eighteenth and part of the nineteenth century in articles in *Zeitschrift für Laryngologie Rhinologie Otologie* 7 (1914–15)–*11* (1923)

1341

Politzer Adam. Geschichte der Ohrenheilkunde. Stuttgart Enke, 1907–13. 2v

Exhaustive, thoroughly documented. Early centuries covered chronologically later periods by country and by subject.

1342

Stevenson, Robert S., and Guthrie, Douglas. A history of oto-laryngology Edinburgh Livingstone, 1949 155p.

Short history well illustrated, with bibliography

1343

Wright, Jonathan. A history of laryngology and rhinology 2. ed. Philadelphia. Lea & Febiger 1914. 357p.

General survey with bibliographic refer-

ences. First edition has title: *Nose and throat in medical history*

Encyclopedias, guides, handbooks

1344

Denker, Alfred, and Kahler, Otto, eds. Handbuch der Hals- Nasen- Ohrenheilkunde, mit Einschluss der Grenzgebiete. Berlin: Springer, 1925–29. 9v

Exhaustive work on otolaryngology including anatomy and physiology of ear, nose, and throat. Still in print.

1345 **

Fowler, Edmund P., Jr., ed. Medicine of the ear. New York: Nelson, 1939–49. 1v

Binder's title: *Nelson loose-leaf medicine of the ear*. Comprehensive work. Includes physiology of hearing, examination and diseases of the ear, and deafness. May be used to supplement *Nelson new loose-leaf medicine* (no. 515). Superseded articles may be found at the Library of the New York Academy of Medicine.

SEE ALSO Allen, *Specialties* (no. 505)

1346 *

Kopetzky, Samuel J., ed. Surgery of the ear. New York: Nelson, 1938–47. 1

Binder's title: *Nelson loose-leaf surgery of the ear*. Comprehensive treatise by many contributors. May be used to supplement *Nelson new loose-leaf surgery* (no. 1838), which also contains otolaryngologic articles. Sec. 8 of that work. Superseded articles may be found at the Library of the New York Academy of Medicine.

1347

Polyak, Stephen L., McHugh, Gladys, and Judd, Delbert K. The human ear in anatomical transparencies. New York: McKenna, [1946]. 136p.

Anatomic and physiologic facts relating to acoustics, hearing, and speech. Utilizes new technique. Under auspices of Sonotone Corporation.

1348 **

Watson, Leland A., and Tolan, Thomas. Hearing tests and hearing instruments. Baltimore: Williams & Wilkins, 1949. 597p.

Comprehensive work. Practically complete bibliography since 1939. A glossary of terms in audiology. Illustrations, graphs, and charts.

Directories

1349

American Annals of the Deaf. January 1948, 93, no. 1. Organizational issue.

Tabular statement of American schools for the deaf, 1850–1948. Vocational education periodicals for the deaf; rehabilitation. Schools throughout the world, American instructors of the deaf, 1947

SEE ALSO *Directory of medical specialists* (no. 281); *Directory of ophthalmologic and otolaryngologic societies* (no. 1317)

PARASITOLOGY

SEE Bacteriology, mycology, parasitology, viruses.

PATHOLOGY

SEE ALSO Technique.

Bibliographies, indexes, abstracts

1350

Berichte über die allgemeine und spezielle Pathologie. Berlin, 1, 1948+

Good abstract journal in German.

1351

Goldschmidt, Edgar. Entwicklung und Bibliographie der pathologisch-anatomischen Abbildung. Leipzig: Hiersemann, 1925. 301p.

Especially fine work with lengthy descriptions and notes, arranged chronologically, well indexed for authors, artists, etc., but not by subject. With 44 excellent plates, many in color.

SEE ALSO *Biological Abstracts* (no. 768b); *Excerpta medica* (no. 90), Section V; *Japanese journal of Medical Sciences* (no. 120E); *Sovetskoe meditsinskoe* (no. 130J); *Tsentral'nyĭ* (no. 131); Serfa A; *Year Book of Pathology* (no. 143K)

SEE ALSO abstract, review, or bibliographic sections of *American Journal of Clinical Pathology*; *Journal of Clinical Pathology*; *Zentralblatt für allgemeine Pathologie und pathologische Anatomie*

Reviews

1352

Ergebnisse der allgemeinen Pathologie und pathologischen Anatomie des Menschen und der Tiere. Wiesbaden, 1, 1894+

Review articles with good bibliographies. Suspended 1944–53.

Biographies

1353

College of American Pathologists. Membership roster. January 1953. Chicago: The College, [1953]. 100p.

Annual. Alphabetic and geographic lists of members.

Histories

In this section "pathology" is not restricted to pathologic anatomy

1354

Ashburn, Percy M. The ranks of death a medical history of the conquest of America. New York Coward-McCann [1947] 298p

Chapters on the discovery period scurvy eruptive fevers, malaria, yellow jack, respiratory diseases, intestinal infections and parasitic worms syphilis; leprosy leishmaniasis, trachoma, and miscellaneous diseases. With bibliography

1355

Bett, Walter R., ed. The history and conquest of common diseases. Norman: Univ of Oklahoma Pr [1954] 334p.

Acute communicable diseases influenza; pneumonia; tuberculosis rheumatism or thritis heart disease; Bright's disease; tonsils and adenoids venereal diseases rickets diseases of the endocrine glands gallstones appendicitis; epilepsy cancer malingering. Chapters mostly by different authors other than in earlier edition with title, *A short history of some common diseases.*

1356

Hirsch, August. Handbook of geographical and historical pathology Tr from the 2. German ed. by Charles Creighton London New Sydenham Society 1883–86. 3

Exhaustive and particularly valuable work, with bibliographic references. Traces history and distribution of specific diseases. V 1 acute infective diseases 2 chronic infective, toxic, parasitic, septic and constitutional diseases 3 diseases of organs and parts.

1357

Krumbhaar Edward B. Pathology New York Hoeber 1937 206p. (Clio medica, no 19.)

With bibliography and chronologic list.

1358

Long, Esmond R. A history of pathology Baltimore: Williams & Wilkins, 1928. 291p.

General survey

1359

Long, Esmond R., ed Selected readings in pathology from Hippocrates to Virchow Springfield, Ill Thomas, 1929 301p.

Different selections from those in Major not so comprehensive but still useful.

1360

Major Ralph H., ed. Classic descriptions of disease. 3. ed. Springfield, Ill.: Thomas, [1945] 679p.

Translated excerpts from original works with biographies of authors, bibliography, and illustrations. Necessary in any medical historical collection.

1361

Sigerist, Henry E. Civilization and disease. Ithaca, N Y: Cornell Univ Pr., 1943. 255p.

Important, illustrated study based on Messenger Lectures delivered at Cornell University 1940–41

Encyclopedias guides, handbooks

1361.1 *

Ackerman, Lauren V *Surgical pathology* St. Louis Mosby 1953. 836p.

Profusely illustrated from actual photographs. Extensive text and good bibliographies.

1362

Henke, Friedrich, and Lubarsch, *Otto, eds* *Handbuch der speziellen pathologischen* Anatomie und Histologie. Berlin: Springer 1924+ v 1+

One of the most extensive and detailed works for the pathologist. Splendid illustrations, many in color Good bibliographies. 13 v in 30 pt. have already been issued. Not yet complete. V 13 in preparation.

1363

Neubuerger Karl T Atlas of histologic diagnosis in surgical pathology with section on exfoliative cytology by Walter Wilde. Baltimore. Williams & Wilkins, 1951 460p.

Contains 880 photographs, with short descriptions.

1364

Nouveau précis de pathologie chirurgicale Jean E. P ed, [*et al.*] Paris Masson, 1947–48. 6v

All volumes can be ordered separately I Pathologie générale, pathologie chirurgicale générale; Affections des membres et des ceintures, 1947 687p II Affections des membres et des ceintures, 1947 620p., III Pathologie de la tête et du cou, *1947 589p* IV Pathologie de l'oesophage, du thorax, du rachis et des seins, *1948*, 558p. V Pathologie de l'abdomen, 1947 955p.; VI. Pathologie de l'appareil *urinaire* et de l'appareil génital masculin, pathologie de l'appareil génital féminin, 1947 967p.

1365

Polonovski, Michel, Boulanger P and Scha-

plra, Georges, eds. Pathologie chimique. Paris: Masson, 1952. 2v

Written by many authors; deals with the chemistry of pathologic lesions and physiology particularly of the cell. Detailed subject index.

1366

Précis de pathologie médicale [par] F Bezançon, R. Boulin, A. Clerc, [et al.] Paris: Masson, 1947+ 8v

All volumes can be ordered separately I. Maladies infectieuses par F Bezançon et P Gastinel, 3. éd., 1947 968p.; II. Maladies infectieuses par F Bezançon et P Gastinel, 3. éd., 1947 774p. III. Maladies de l'appareil respiratoire par F Bezançon, 4. éd., 1949 1,054p.; IV Coeur et vaisseaux V Reins (in preparation); VI. Nutrition, articulations, os, avitaminoses (in preparation) VII. Maladies du sang et des organes hématopoiétiques: Intoxications: Cancer par P E. Weil [et al.] 5 éd., 1948, 632p.; VIII. Maladies endocriniennes par A. Sézary et J Lenègre, 2. éd., 1948 714p

1367 ★

Schafer Paul W Pathology in general surgery Chicago: Univ of Chicago Pr 1950. 580p.

Contains 495 plates, many in color Ample text and bibliographies.

1368

Selye, Hans. The physiology and pathology of exposure to stress Montreal Acta, Inc., [1950] 822+203p.

Comprehensive treatise on general adaptation syndrome and the diseases of adaptation. Extensl bibliography

1369

U.S. Naval Medical School. Color atlas of pathology Philadelphia. Lippincott, [1950] 546p.

Arranged by organic systems with 363 colored plates and text. Useful also for dental subjects.

PATHOLOGY CLINICAL

see Diagnosis.

PEDIATRICS AND CHILD WELFARE

Bibliographies, indexes, abstracts

1370

Child Development Abstracts and Bibliography. Washington, v.1 1927+

V 1 as *Selected Child Development Abstracts*. Issued for the Society for Research in Child Development by the National Research Council, Committee on Child Development. International in scope, but stronger in American and British material.

1371

Meissner Friedrich L. Grundlage der Literatur der Pädiatrik. Leipzig: Fest, 1850. 246p.

Classified checklist without index.

1372

U.S. Children's Bureau. Publications for sale. Washington: Govt Print. Off., 1932. 49p.

Arranged by subject; includes numbered list of publications, in the order in which they appeared, which was incorporated in the U.S. Department of Labor's *Publications* 1946 (see this *Handbook* p.517) In 1946, the Bureau was taken over by the Federal Security Agency Since then the Bureau has only issued selective checklists of its publications without complete bibliographic data. Therefore, for bibliography of the Bureau, this list and that mentioned on p.517 give the only complete records.

1373

U S. Office of Education. [List of publications for sale] Office of Education and other publications relating to education. Price list 31, 41 ed., October 1952. Washington Govt. Print. Off., 1952. 18p. Free.

Arranged by subject; revised frequently Useful for publications on health education, vocational guidance, and training of handicapped children. The 31. ed., 1941, has 50 pages and is much more extensive.

1374

Zentralblatt für die gesamte Kinderheilkunde. Berlin, 1 1911+

V 1–8 as "Referat" section of *Zeitschrift für Kinderheilkunde* Abstract journal. Comprehensive; especially good for foreign literature. The references abstracted here are also published separately as *Jahresbericht Kinderheilkunde* (previously entitled *Jahresbericht über die gesamte Kinderheilkunde* and *Bibliographie der gesamten Kinderheilkunde*) Suspended 1944–51

1375

Zentralblatt für Kinderheilkunde. Leipzig, 1–22, 1896–1917

Abstracts divided into two sections: one from German journals, the other from non-German.

see also *Ergebnisse der inneren Medizin und Kinderheilkunde* (no. 138) *Excerpta medica* (no. 90) Section VII; *Japanese Journal of Medical Sciences* (no. 120H); *Sovetskoe*

meditsinskoe (no. 130C); *Taschenbuch* (no. 131) Series B; *Year Book of Pediatrics* (no. 143L)

SEE ALSO abstract, review or bibliographic sections of *A.M.A. American Journal of Diseases of Children*, *Actualidad pediátrica: revista de bibliografía internacional*, *Archiv für Kinderheilkunde*, *British Journal of Children's Diseases*; *Journal of Pediatrics* (section entitled "Current pediatric literature"); *Pediatria*, *Quarterly Journal of Child Behavior*, *Zeitschrift für Kinderforschung*

Reviews

1376 * *
Advances in Pediatrics. New York, v.1, 1942+
Good reviews with bibliographies.

1377
Courrier of the International Children's Centre. Paris, v.1 1950+
Reviews on child welfare in French or English with summary in both languages. The *Bibliographie Analytique* gives brief abstracts of current literature in French and English. Photo-reproductions available of articles abstracted. Subject index in French and English, an author list, and list of journals abstracted arranged by country

Biographies

1378
American pediatric directory: a listing of pediatricians of the United States with biographical information. Pub. and ed. by Joe T Smith. Knoxville, 1935+
Earlier editions included lists of pediatric societies and list of hospitals approved for pediatric residency. 6. ed., 1953–54 (274p.) is limited to professional biographies of pediatricians arranged by state with name index.

1379
American Pediatric Society. Semi-centennial volume of the American Pediatric Society 1888–1938. [Menasha, Wis.] Privately printed, [1938] 534p.
Biographies of members, past and present. Personal and professional information and portraits.

1380
Levinson, Abraham. Pioneers of pediatrics. 2. ed. New York. Froben Pr. 1943. 119p. (Historia medicinae, no. 9.)
Brief sketches, with bibliography

1381
Pease, Marshall C. American Academy of Pediatrics, June 1930 to June 1951 [Evanston, Ill.]: The Academy. 1952. 302p.
A history and survey of its activities and members.

SEE ALSO *Directory of medical specialists* (no. 281)

Histories

1382
Caulfield, Ernest J. The infant welfare movement in the eighteenth century. New York. Hoeber. 1931. 203p.
Devoted to the English movement. With bibliography

1383
Garrison, Fielding H. "History of pediatrics. In. Abt, Isaac A., ed. *Pediatrics by various authors*. Philadelphia, [1923] v.1, p.1–170.
Valuable, detailed history

1384
Marcolini, Giuseppe. Il bambino nell'arte visto da un medico. Milano: Hoepli, 1933. 363p.
Useful for illustrations of infants, normal or abnormal, as they are depicted in art.

1385
Ruhräh, John. Pediatrics of the past. New York. Hoeber. 1925. 592p.
Historical and biographic notes with excerpts from original contributions.

1386
Still, Sir George F. The history of paediatrics. London. Oxford Univ. Pr. 1931. 526p.
General survey, through the eighteenth century only, with biographies. Appendixes contain lists of inaugural dissertations on the subject and other minor writings.

SEE ALSO Levinson (no. 1380)

Encyclopedias, guides, handbooks

1387 *
American Academy of Pediatrics. Committee for the Study of Child Health Services. Child health services and pediatric education. New York. Commonwealth Fund, 1949. 270p.
A report, prepared with the cooperation of the U.S. Public Health Service and the U.S. Children's Bureau, on existing health and welfare services, private and public, with many valuable statistical tables and charts. References.

1388 * *
Brennemann, Joseph, ed. Practice of pediatrics, by various authors. Hagerstown, Md.: Prior. 1937+ 4v. and index.

Comprehensive loose leaf work. Similar in arrangement to Tice's *Practice of medicine* (no. 518) Contains good historical study of pediatrics, by country and under the United States by state. Extensive sections on child welfare and hygiene. Superseded articles may be found t the Library of the New York Academy of Medicine.

1389

Peter Karl G., Wetzel, Georg, and Helderich, Friedrich, eds. Handbuch der Anatomie des Kindes. München: Bergmann, 1927–38. 2v

Covers not only topographic anatomy but also problems of growth and development, both post- and ante-natal. Out of print.

1390

Pfaundler Meinhard, and Schlossmann, Arthur eds. Handbuch der Kinderheilkunde; ein Buch für den praktischen Arzt. 4 Aufl. Berlin: Vogel, 1931. 4v Supplementary volumes, v.5–10, 1926–35 Ergänzungswerk (Ergänzungen zu den Bänden 1–4 des Hauptwerkes) 1 1942+

When the 4. ed. was published, 5–9 of the 3. ed. were not revised and are therefore supplementary to it. V 10 furnished an additional supplement, as did 1 *Ergänzungswerk*, 1942. The German edition is more comprehensive than the English translation, edited by M. G. Peterman, *Diseases of children* (Philadelphia Lippincott, 1935) 5 which omits the supplement volumes.

1390.1

Schlesinger Edward R., Health services for the child. New York: McGraw-Hill, 1953. 403p.

Surveys and evaluates existing conditions and services. Good bibliographies. Not a directory

1391

White House Conference on Child Health and Protection, Washington, 1930. [Reports.] New York: Century 1930–36. 33v

Studies inaugurated at the conference called by President Herbert Hoover in 1930. very aspect of child welfare. Good bibliographies. An indispensable reference work r the pediatrician, public health and social ervice worker and child psychologist.

392

Vhite House Conference on Children in Democracy Washington, 1939–40. [Publications.] Washington: [n.p.] 1939–42.

A. Papers and discussions at the initial ession, 1939 11"p. (U.S. Children's Bureau. Publications no. 265); B. Preliminary statements submitted [1940] 257p.; C. Proceedings including the General Report adopted, 1940, 125+85p. (U.S. Children's Bureau. Publications no. 266); D. Final report [Washington, 1942] 392p. (U.S. Children's Bureau. Publications no. 272) Evaluates and continues work commenced t 1930 conference.

1393

Midcentury White House Conference on Children and Youth, Washington, 1950. Children and youth at the midcentury; report on youth, national organizations, federal government [Raleigh, N.C., Health Publications Institute, 1950.] 122p.

Written by young people, this covers youth-adult relationships, growing into adulthood, and community life. Includes lists of participating national organizations and federal programs affecting children and youth.

1393a

—— Citizens in action; report on state and local action. [Raleigh, N.C.: Health Publications Institute, 1950.] 61p.

On cover: "Children and youth at the midcentury; report on state and local action. Describes how state and local committees prepared for the Conference, including their consideration of health needs.

1393b

—— A graphic presentation of social and economic facts important in the lives of children and youth. [Raleigh, N.C.: Health Publications Institute, 1951.] 75 charts.

On cover: A chart book; children and youth at the midcentury Striking charts in red, black, and white emphasize numerous factors influencing child life, such as divorce, family income, and working mothers.

1393c

—— Proceedings; report of Conference sessions, Washington, D.C., December 3–7 1950. Raleigh, N.C.: Health Publications Institute, [1951] 363p.

Includes selected addresses, papers, and summaries of opinions.

1393d

—— A healthy personality for every child; digest of the fact finding report. [Raleigh, N.C.] Health Publications Institute, 1951 197p.

Includes the points of view which the Committee believes important to bring to the ttention of the American people.

1393e

—— Personality in the making: the fact finding report of the Conference. Ed. by Helen Leland Witmer [and] Ruth Kotinsky New York: Harper [1952] 454p.

Basic information on the development of healthy personality in children, gathered from experts.

SEE ALSO Blackfan (no. 1078) Gross (no. 1833) Levy (no. 1742) Macy (no. 1072)

Directories

1394
National Society for Crippled Children. Directory of hospitals and convalescent institutions engaged in work for crippled children in the United States of America. Elyria, O., The Society 1942. 115p.

Compiled by the Bureau of Information under the direction of A. R. Shands, J. A useful compilation, covering the facilities and professional staffs of over 600 institutions. First edition published as International Society for Crippled Children, *Directory* 1938. Out of print.

1395
United Nations. Department of Social Affairs. International directory of nation-wide organizations concerned with family, youth and child welfare. [Geneva(?)] 1952. 289p.

Lists national organizations, both government and voluntary, of 48 countries. Arranged by country; addresses given, but little additional information.

1396
U.S. Children's Bureau. Residential treatment centers for emotionally disturbed children. Washington, Govt. Print. Off. [1953(?)] 78p.

First directory of this type published in this country. Lists 36 agencies throughout the United States for use by professional workers, parents, and others concerned with the care of children.

SEE ALSO American Public Welfare Association (no. 1745) *Public administration or prevention* (no. 1747) Redkey (no. 1665.1) Rusk and Taylor (no. 1666)

Dictionaries

1397
Smith, Anna K. A glossary of certain child-welfare terms in Spanish, Portuguese, French and English. [Rev. ed.] Washington, Govt. Print. Off. 1948. 115p. (*U.S. Children's Bureau. Publications no. 271*)

Prepared for distribution at the Eighth Pan American Child Congress, by the International American Institute for the Protection of Childhood in collaboration with the U.S. Children's Bureau. Separate lists of terms in each language. Reprinted from 1942 edition with minor changes.

PHARMACOLOGY AND PHARMACY

SEE ALSO Antibiotics; Botany and agriculture; Chemistry and biochemistry; Poisons and poisoning; Technique; Therapeutics

Bibliographies, indexes, abstracts

1398
Guerra, Francisco. Bibliografía de la materia médica mexicana. Catálogo alfabético según autores de libros, monografías, folletos, tesis recepcionales y artículos en revistas periódicas que se refieren a las propiedades medicinales de las drogas mexicanas. México, Prensa Médica Mexicana, 1950. 423p.

Exhaustive checklist.

1399
Hocking, George M. Serials pertaining to pharmacognosy and pharmacology. 2. ed. New York: Penick, [1944] 32p.

Useful list of over 700 entries, divided in two sections: Pharmacognosy and Pharmacology. Current titles indicated. Extensive reports and treatises included. For much shorter lists, see those prepared by the Committee on Libraries of the American Association of Colleges of Pharmacy in *American Journal of Pharmaceutical Education* v. 14, p. 614–24, and in Special Libraries Association (no. 1141)

1400
Jahresbericht der Pharmazie. Göttingen, v. 1–77(?) 1866–1942(?)

Continuation of *Canstatt Jahresbericht über die Fortschritte in der Pharmacie und verwandten Wissenschaften*. Published by the Deutscher Apothekerverein. V. 1–21 1866–89 as *Jahresbericht über die Fortschritte der Pharmakognosie, Pharmacie und Toxicologie*. Abstract journal, particularly good for foreign literature.

1401
Merck and Company. [Annotated bibliographies of various drugs and vitamins] Rahway, N.J. Merck, 1940+ Processed. Free.

This useful series of bibliographies covers the recent literature on various vitamins and a few of the important new drugs. Abstracts represent a good cross section of the literature and give unbiased résumés. Revised and cumulated from time to time.

1402
Pharmazeutische Zentralhalle für Deutschland. Dresden, 1– 1859+

Abstract journal useful for locating elusive items on foreign proprietary medicines. Suspended 1944–47

1403

Smith, Frank A., and Cox, G. J. A bibliography of the literature (1936–1952) on the pharmacology and toxicology of fluorine and its compounds, including effects on bones and teeth. Rochester, N.Y. Univ. of Rochester Atomic Energy Project, 1952. 186p. (UR-154 (rev.))

Contains 2,449 references, not annotated as in 1. ed., 1951 arranged by author

1404

Special Libraries Association. Science Technology Division. Pharmaceutical Section. Union list of periodicals in pharmaceutical libraries. New York: The Association, 1952. 189 numbered leaves. Processed.

Gives the holdings of 25 pharmaceutical libraries in the United States and Canada, most of which are not represented in the Gregory *Union list of serials* (no. 22) or in the Association's *Union list of technical periodicals* (no. 21)

1404.1

Squibb Abstract Bulletin. Brooklyn, N.Y. v.1 1928+ Processed.

Published weekly by the staff of the Squibb Institute for Medical Research Library. Abstracts, often detailed, from world literature on medicinal materials, in classified arrangement. Copies multigraphed on one side of the page, suitable for clipping, are available.

SEE ALSO *Berichte über die gesamte Physiologie und experimentelle Pharmakologie* (no. 1463); *Biological Abstracts* (no. 768b); *Excerpta medica* (no. 90) Section II; *Japanese Journal of Medical Science* (no. 120D) *Sovetskoe meditsinskoe* (no. 130K) *Tcentral'nyi* (no. 131) Series A; *Year Book of General Therapeutics* (no. 143F); *Zentralblatt für Bakteriologie Abt I Referate* (no. 743)

SEE ALSO abstract, review or bibliographic sections of *Journal of the American Pharmaceutical Association Scientific Edition*, *Journal of Pharmacy and Pharmacology*, *Quarterly Journal of Pharmacy and Pharmacology*

Reviews

1405

Burger, Alfred. Medicinal chemistry. New York: Interscience Publishers, 1951. 2v.

Review articles with bibliography through July 1951 of chemistry, biochemistry, therapeutic and pharmacologic action of natural and synthetic drugs.

1406

Gross, Martin, and Greenberg, Leon A. The salicylates; a critical bibliographic review. New Haven: Hillhouse Pr., 1948. 380p. (Monographs of the Institute for the Study of Analgesic and Sedative Drugs, 2.)

"Bibliography and author index" of 4,093 references: p.195–380. Other volumes published in this important critical review series deal with acetanilid, antipyrine, and other drugs.

1407 *

Medicinal Chemistry. New York, 1 1951+

Under the auspices of the American Chemical Society Division of Medicinal Chemistry. Reviews with bibliographies of all compounds tested for particular type of pharmacological activity. Arranged by function of compounds. Useful to biochemists and pharmacologists.

1408 * *

Pharmacological Reviews. Baltimore, 1 1949+

V. 1–2 as supplement to *Journal of Pharmacology and Experimental Therapeutics* beginning with 3, 1951 separate publication. Good review articles with extensive bibliographies.

Biographies

1409

American Pharmaceutical Association. Pharmaceutical directory 1946+

Last edition in *Journal of the American Pharmaceutical Association* Scientific Edition, Special Supplement to 41, no. 2 (February 1952) 160p. Lists officers, sections, committees, and active members, national and state pharmaceutical associations, colleges of pharmacy, state boards of pharmacy and American pharmaceutical journals.

Histories

1410

Benedicenti, Alberico. Malati, medici e farmacisti: storia dei rimedi traverso i secoli e delle teorie che ne spiegano l'azione sull'organismo. 2 ed. Milano: Hoepli, 1947+ 2v.

V. 1 through the eighteenth century. No index, but perhaps there will be one in 2. A detailed history of pharmacy

1411

Bouvet, Maurice. Histoire illustrée de la pharmacie. Paris: Le Prat, [1949] 193p.

Profusely illustrated with fine reproductions, some in color. Of interest in the history of medicine and pharmacy

1412

Galdston, Iago. Behind the sulfa drugs: short history of chemotherapy. New York: Appleton Century 1943. 174p.

Readable survey from Paracelsus through the 1930's.

1413

Kremers, Edward, and Urdang, Georg. History of pharmacy. Philadelphia: Lippincott, [1940] 466p.

Useful history with bibliography. Glossary contains brief biographic notices as well as explanations of terms used. Best of the general surveys.

1414

LaWall, Charles H. The curious lore of drugs and medicines. Garden City N.Y. Garden City Pub. Co. 1937. 665p.

Readable story. Earlier edition has title *Four thousand years of pharmacy*

1415

Pedrazzini, Carlo. La farmacia storica ed artistica italiana. Milano: Vittoria, [1934] 592p.

A large folio volume, handsomely illustrated throughout.

1416

Silverman, Milton M. Magic in a bottle. [2 ed.] New York: Macmillan, 1948. 386p.

Popular account of discovery of various medicines from morphine to radium, with bibliography. British edition has title *War against disease*

1417

Thompson, Charles J. S. The mystery and art of the apothecary. London: Lane, [1929] 287p.

Short, readable history arranged chronologically

1418

—— The mystery and romance of alchemy and pharmacy. London: Scientific Pr. 1897. 335p.

Short, readable history arranged by subject.

1419

Wootton, A. C. Chronicles of pharmacy. London: Macmillan, 1910. 2v.

Excellent history. Particularly useful for information concerning medicines, drugs, nostrums, etc., as well as biographic material about apothecaries

SEE ALSO Laignel-Lavastine (no. 712); Tschirch (no. 1425)

Encyclopedias guides handbooks

1420

Berger, Franz. Handbuch der Drogenkunde, Erkennung, Wertbestimmung, und Anwendung. Wien: Maudrich, 1949+ 6v

V. 1–3 are published. Approach is different from Tschirch *Handbuch* (no. 1425). The botanic aspects and descriptions of medicinal plants are emphasized. Beautifully illustrated.

1421

Burn, Joshua H., Finney, David J. and Goodwin, L. G. Biological standardization. 2. ed. London: Oxford Univ. Pr. 1950. 440p.

Classification of methods and statistical analysis, followed by standards and methods listed by substance.

1422

Heffter, Arthur, and Heubner, Wolfgang, O. L., eds. Handbuch der experimentellen Pharmakologie. Berlin: Springer, 1920+ v.1+

3 v. in 7 and 10 supplementary volumes so far issued. Exceedingly detailed and comprehensive survey. Good bibliographic footnotes. Some articles in English. Supplement volumes still published from time to time.

1423

Krueger, Hugo M., Eddy, Nathan B., and Sumwalt, Margaret. The pharmacology of the opium alkaloids. [Washington: Govt. Print. Off. 1941–43.] 2v. (Public Health Reports, Suppl. no. 165)

Pt. 1: Morphine. Pt. 2: Other alkaloids. Detailed presentation, thorough review of the literature. Exhaustive chronologic bibliography of over 9,000 references.

1424

Remington, Joseph P. Practice of pharmacy: a treatise on the preparing, standardizing, and dispensing of official, unofficial, and extemporaneous pharmaceutical products. 10. ed. by E. Fullerton Cook and Eric W. Martin [et al.] Easton, Pa.: Mack, [1951] 1,616p.

Very comprehensive, with brief history of pharmacy. Introduction to the literature and methodology. Drugs arranged by subject type with excellent subject index. Indispensable for the pharmaceutical library

1425

Tschirch, Alexander, ed. Handbuch der Pharmakognosie. 2. Aufl. Leipzig, 1930+ 1+

A comprehensive study with lengthy bibliographies, of drugs, including the plants from which they come, from the morphologic, physiologic, and chemical standpoint.

The geographic distribution, collecting, marketing, and history of drugs are discussed. Excellent historical material throughout. Pt. 1–3 of v. 1, 1930–33, have been issued. Not yet complete. V. 2, p.1,008–1,151 1932, contains Josef A. Häfliger's "Biographische und bibliographische Zusammenstellung zu der Pharmakognosie, der Pharmakochemie, der Pharmakohistorie und ihren Grenzgebieten.

SEE ALSO Bethe and Bergmann (no. 1477)

Pharmacopoeias dispensatories unofficial lists of drug

These works fall roughly into three categories: (1) standard official lists sponsored by the governments of the various countries (2) supplementary semiofficial lists which discuss in detail the substances published in the official works, with some additions; and (3) the drug lists which describe the multitude of modern unofficial therapeutic preparations on the market. A few of each type are represented here. They are arranged by country but no attempt has been made to include all of the official pharmacopoeias published. For additional information, consult the *Index-Catalogue* (no. 104) under "Pharmacopoeias, and Strieby (no. 1426)

1426

Strieby Irene M., and Spencer Marjory C. "National and international pharmacopoeias checklist, *Bulletin of the Medical Library Association* 40 (April, 1952) 153–61.

Official pharmacopoeias from 37 countries. A bibliography is appended.

1427

Ludwig, Herbert, *et al.* Repertorium pharmazeutischer Spezialpräparate, Sera und Impfstoffe. Basel. Verlagsgesellschaft Beobachter A.G., 1946. 1,308p. Supplement volumes, 1947+

International in scope. Lists commercial preparations alphabetically with manufacturers names, composition, and dosage. Separate list of indications for use and directory of producers.

1428

World Health Organization. Pharmacopoea internationalis. International pharmacopoeia Genev The Organization, 1951+ 2v (Bulletin of the World Health Organization, Suppl. 2.)

V. 2 in preparation. Terminology in Latin. Text in English. A French edition and Spanish in preparation. It is hoped this will aid in general acceptance of international standards and dosage for drugs.

France

1429

France. Codex medicamentarius gallicus seu Pharmacopoea gallica. Pharmacopée française, rédigée par ordre du Gouvernement. 6. éd. Edité sous la direction de la Commission du Codex. Rennes Oberthur 1937 2v Supplement, 1947 52p.

Official French pharmacopoeia. Contains much more extraneous material than the English and American pharmacopoeias, and lists more drugs. Extensive section on drug laws, v. 1 p.5–323. Comprehensive tables listing drugs and indicating in which of the previous editions they are to be found. Drugs arranged by Latin names.

Germany

1430

Deutscher Apotheker Verein. Ergänzungsbuch zum Deutschen Arzneibuch. (Arzneimittel, die im Deutschen Arzneibuch nicht enthalten sind.) 6. Ausg. Berlin. Der Verein, 1941. 632p.

Supplements the *Deutsches Arzneibuch* containing drugs not included in that list. Arrangement by Latin name. Index by German name. Formulas and directions for preparation given, but not uses.

1431

Deutsches Arzneibuch, 6. Ausgabe, 1926. Neudruck 1951 mit eingearbeiteten Nachträgen. Berlin Decker [1951] 854p

Official German pharmacopoeia. The 1951 edition is a reprint of the 6. ed., 1926, with "Nachträgen incorporated. Additions to, and omissions from, the previous edition are noted. Drugs listed by Latin name. The 5. ed. appeared in 1910. A 1947 printing included substitutes necessitated by the war; these are omitted in the 1951 reprint.

1432

Gehes Codex der pharmazeutischen Spezialpräparate mit Angaben über Zusammensetzung, Indikationen, Zubereitungsformen und Hersteller Bearb. von Georg Otto, 8. Aufl. Stuttgart: Wissenschaftliche Verlagsgesellschaft, 1953. 927p.

International in scope. Patent and proprietary medicines and cosmetics included. Drugs are listed by German name and by trade name, including those of foreign preparations. If known by more than one trade name, the equivalents are given. Includes addresses of manufacturers, formulas, and brief notes of uses.

Great Britain

1433

British Medical Association and Pharmaceutical Society of Great Britain. National formulary London The Association and the Society 1949+

Compiled by the Joint Formulary Committee. Last edition, 1952. A standard "prescribers formulary" rranged by Latin names according to their predominant action on one of the bodily systems; under English headings. Includes list of proprietary names.

1434

Ferguson, James K. W and Lucas, George H. W Henderson materia medica. [2. ed.] Toronto Univ of Toronto Pr 1951 314p.

Alphabetic listing of drugs used in English-speaking countries. Based chiefly on the *British pharmacopoeia th British pharmaceutical codex* and *New and nonofficial remedies.*

1435

Great Britain. General Medical Council. British pharmacopoeia, 1953. [8. ed.] London Pharmaceutical Pr [1953] 894p.

Standard official list of drugs. Names of substances added to and deleted from last edition (1948) are listed, also changes of name and composition. For the first time, the listing is by English rather than by Latin drug name.

1436

Martindale William, The extra pharmacopoeia. 23 ed pub. by direction of the Council of the Pharmaceutical Society of Great Britain. London Pharmaceutical Pr 1952. 2v

Includes new drugs and preparations and gives an account of their status. Drugs arranged by Lati name. Formula, dose, and uses are gi en, the latter so extensi ely that it has value as an outl ne of drug therapy Bibliographic citations included Sections on antibiotics, antimeria, nd drug legislation, including Penicillin Act

1437

Pharmaceutical Society of Great Britain The British pharmaceutical codex, 1949 London Pharmaceutical Pr , 1949 1562p

Formerly edited by C E. Corfield present editor T C Denston British equi alent of *Dispensatory* (no 1444) Drugs arranged under Lati name

Spain

1438

Diccionario español de especialidades farmacéuticas, DEDLF 3. ed. San Sebastian, Spain: DEDEF 1950–51 1418p.

Spanish pharmaceuticals alphabetically arranged giving manufacturer composition in grams, and dose- list of manufacturers. Kept up to date between editions by a cumulative supplementary bulletin

United States

1438.1

American Medical Association. Chemical Laboratory *Tests and standards for new and nonofficial remedies, containing tests and standards*, accepted by the Council on Pharmacy and Chemistry Philadelphia. Lippincott, 1953+

Continues the second section of the Association's *New and nonofficial remedies* (no. 1440) Structural formulas and Council-accepted trade names are included.

1439

——Council on Pharmacy and Chemistry Epitome of the Pharmacopeia of the United States and National formulary with comments. 9. ed. Philadelphia Lippincott, [1951] 255p.

Abstracts material from the *Pharmacopeia* which is of special interest to physicians.

1440 * *

—— ——New and nonofficial remedies containing descriptions of the articles which stand accepted. Philadelphia Lippincott, 1909+

Revised annually This useful list supplements the *Pharmacopeia* (no. 1448) *National formulary* (no. 1442) and the *Dispensatory* (no. 1444) Its frequent revisions make it especially useful during the intervals between he publication of new editions of these works. It includes nonofficial proprietary and nonproprietary drugs and preparations. Official preparations are only included when offered for sale under names which do not make their official tatus clear or if the therapeutic properties claimed for them are different from those accredited to them in the official lists.

Previous to 1953, this publication consisted of two principal sections (1) general statements and monographs describing actions, uses, and dosages of various drugs; (2) tests and standards for Council accepted drugs for which official tandards were not available. Beginning w th the 1953 edition, these two sections appear s separate volumes. *New and nonofficial remedies* continues the material formerly in the first section above, while the information given in the second section is published under its own title, *Tests and standards for new and non fficial remedies* (no. 1438.1)

1441 ★★

—— Useful drugs; selected list of essential drugs with brief discussions of their actions, uses, and dosage. 15 ed. Philadelphia: The Association, Lippincott, 1952. 262p.

A list of important drugs based on the *Pharmacopeia* and its supplements and on *New and nonofficial remedies*. Arranged under the English name. Useful for rapid reference, but not very comprehensive.

1442 ★

American Pharmaceutical Association. The national formulary 9 ed. Prepared by the Committee on National Formulary by authority of the American Pharmaceutical Association. Official from November 1 1950. Washington The Association, 1950. 877p.

Supplements the *Pharmacopeia* by inclusion of drugs not important enough to be listed there but of sufficient value to be standardized.

1443

—— Pharmaceutical recipe book (R.B III) by authority of the American Pharmaceutical Association prepared by the Committee on Recipe Book of the American Pharmaceutical Association. 3. ed. [n.p.] The Association, 1943. 551p.

Recipes for preparations not found in the official books, including toilet preparations

1444 ★

Dispensatory of the United States of America, 1950, [24.] edition [by] Arthur Osol, George E. Farrar J [and others] Complete in 2 volumes. Volume One Based on the thirteenth revision of the United States Pharmacopoeia, the National Formulary eighth edition, and the British Pharmacopoeia, 1932, and its addenda. Volume Two Being commentary on the new drugs introduced in the fourteenth revision of the United States Pharmacopoeia, the National Formulary ninth edition, the British Pharmacopoeia, 1948, as well as the new drugs not officially recognized. Philadelphia Lippincott, 1951 2 in 1 2,057p.

This is the reprinted dispensatory with revisions from 1947 to 1950 V 2 also sold separately as a companion to the 24. ed with supplements under title "New Drug Developments. The first to eleventh editions ere edited by George Bacon Wood and Franklin Bache. The book is di ided as follows: (1) the drugs listed in the *Pharmacopeia of the United State* (no. 1448) the *National formulary* (no. 1442) nd the *British pharmacopoeia* (no. 1435) discussed i much greater detail than in these official lists (2) a large number of unofficial drugs (3) many general tests, standards, and reagents used in clinical examinations (4) veterinary uses and doses of drugs; (5) tables of the U.S. *Pharmacopeia* or the *National formulary* An exceedingly useful compilation.

1445 ★★

Merck index of chemicals and drugs; an encyclopedia for the chemist, pharmacist, physician, and allied professions. 6. ed. Rahway N J Merck, 1952. 1,167p.

Practical descriptions of drugs and chemicals, with use and dosage. Section on the dyes permitted for foods, drugs, and cosmetics. A table of indicators and of radioactive isotopes. The section on chemical and clinical reactions, tests, and reagents, listed by the thor's name, useful feature of the 5 ed., is replaced by organic name reactions.

1446 ★★

Modern drug encyclopedia and therapeutic index, 5 ed., ed. by Marion E. Howard. New York: Dru Publications, [1952] 1 431p.

Previous editions, 1934–49 edited by Jacob Gutman. Describes 1 475 new drugs. Broadly classified and listed by trade name. Four indexes: therapeutic, generic name manufacturers and distributors, and general index. An invaluable work, revised frequently Between revisions, kept up to date by *Modern Drug* published quarterly

1447 ★

PDR. Physicians desk reference to pharmaceutical specialties nd biologicals, 1954. 8 ed. Rutherford, N.J Medical Economics, 1953 616p.

Issued in five sections I. alphabetic by brand and manufacturer; II. by drug III therapeutic indications; IV information about composition, etc., V general information including manufacturers' educational material, cosmetic irritants, pollination schedule, normal findings, eye bank hospitals, and other useful information.

1448 ★

The Pharmacopeia of the United States of America Fourteenth revision (U.S.P XIV) and the first U.S.P XIV Supplement. By authority of the United States Pharmacopoeial Convention, Inc., meeting t Washington, D.C., May 14 and 15 1940. Prepared by the Committee of Revision nd pub. by the Board of Trustees. Official from November 1 1950 Easton, Pa., Mack, [1950] 1,067p. Suppl. 1 2, 1950. 5p. Suppl. 3, 1951(?) 20p. Suppl. 4 (final) 1954. 15p.

U.S. standard official list of therapeutic agents. Additions and deletions since 13. ed. are noted. Has section containing tests, processes and apparatus, useful tables of atomic and molecular weights, and equivalents of weights and measures. Several supplements are usually published between editions. A list of pharmaceutical substances in English and Spanish is useful feature.

1449 * *

Unlisted Drugs published monthly by the Unlisted Drugs Committee of the Pharmaceutical Section, Science-Technology Division, Special Libraries Association. Brooklyn, N Y v.1, 1949+

Exceedingly useful list of drugs which do not appear in any of the standard drug handbooks such as Modern drug encyclopedia (no. 1446) or *Merck index* (no. 1445) Drugs are listed by number and name, and for each formula are given action, name of manufacturer equivalent (if any) dosage (when known) and literature reference. Indexed first by number then by name of drug

Directories

1450

Drug Topics Red Book. New York. 1897+

Indispensable for the hospital drug room. Alphabetic listing of items, prices, lists pharmacists reference for timely facts, manufacturers catalogs with names and addresses Another similar book giving prices is the *American Druggist Blue Book* put out by the *American Druggist* and revised annually

Dictionaries

1451

Arends, Georg Volkstumliche Namen der *Arzneimittel, Drogen, Heilkräuter und* Chemikalien. 13. Aufl. bearb. von Johannes Arends. Berlin Springer 1948. 262p

Vernacular German names for drugs and pharmaceutical *plants and chemicals, fol*lowed by technical term in Latin

1452

Cooper John W and McLaren, Alexander C. Latin for pharmaceutical students; six months course of Latin for students of pharmacy and medicine 5 ed. London Pitman, 1950. 115p.

Really a grammar but has good vocabularies, both Latin-English and English-Latin. Has an extensive section on prescriptions and their abbreviations.

1453

May & Baker Ltd. Chemical and pharmaceutical synonyms, trade names and trade marks. 2. ed. Dagenham, Eng.: May & Baker 1953, 172p.

Compiled from the literature and "issued *for the technical information of those concerned in medicine and pharmacy* An up to date and comprehensive list. Only names of active substance or substances given, followed by synonym, trade name, or trade mark and vice versa.

1454

Rangel, Mário C. de Freitas. Dicionário de sinônimos químico-farmacêuticos. Rio de Janeiro [Giorgio] 1950. 246p.

Portuguese dictionary of pharmaceutical, chemical, physical, and some biologic terms, names of medicinal plants. Many terms defined and substances described.

1455

Steinmetz, E. F Codex vegetabilis. Plantaardige drogerijen en specerijen botanical drugs and spices, trade-dictionary Amsterdam [The Author 1947] lv (unpaged)

Glossary in Latin, Dutch, German, Eng*lish, and French, with the botanic origin and family indicated.*

1456

Ubertus, Karl H. Arzneimittel-, Drogen-, Chemikalien- und Heilkräuter-Fachwörterbuch die wissenschaftlichen und volkstümlichen Bezeichnungen Lateinisch-deutsch, deutsch-lateinisch. 7 Aufl. Berlin Mayer 1940. 2 108 columns.

Very useful for translating and for obtaining Latin equivalents of German terms for drugs and diseases.

1457

Zekert, Otto. Pharmazeutische Terminologie. Wien Urban & Schwarzenberg, 1948. 360p.

Terms listed with definitions; formula often given.

SEE ALSO Arber (no. 810); Rohde (no. 814); Bederian (no. 816); *Entsiklopedicheskii slovar* (no. 817)

PHILATELY

SA Stamps, medical.

PHLEBOTOMY

Histories

1458

Bauer, Joseph. Geschichte der Aderlässe. München Gummi, 1870. 230p.

Short history without index.

PHYSICS

SEE ALSO Atomic energy and effects of radiation; Radiology; Ultrasonics.

Bibliographies Indexes, abstracts

This is in no sense a comprehensive bibliography for this subject. Other such works can be found in Winchell' *Guide* and comparable publications. Selection here has been based on the indirect application of these tools to the medical sciences or on the fact that they offer general bibliographic works from which the medical scientist can select material of interest.

1459

Gray Dwight E., and Bray Robert S. Abstracting and indexing services of physics interest, *American Journal of Physics 18* (May 1950) 274-99

Copies may be obtained from Office of Technical Services, U.S. Department of Commerce (as OTS Serial No. PB-99951) 75 cents. Good, concise descriptions of each service with index.

1460

Physics Abstracts. London, v 1 1898+

V 1-43, 1898-1940, in *Science Abstracts Section A. Physics* title varies. Edited by the Institution of Electrical Engineers in association with the Physical Society of London, the American Physical Society and the American Institute of Electrical Engineers. Good coverage of foreign literature, but all titles are in English. For medical journals covered, SEE *World medical periodicals* (no 161)

SEE ALSO *Bibliografia italiana* (no. 1) Section A, *Japanese Journal of Medical Sciences* (no. 120C)

Reviews

1461 ★

Advances in Biological and Medical Physics. New York, 1 1948+

Irregular Several years covered per volume. Good reviews nd bibliographies isotopes and radioactivity included.

Encyclopedias, g ides handbooks

1462

Glaser Otto, ed. Medical physics. Chicago Year Book Publishers, 1944-50. 2

Exhaustive work by many contributors V 2 also entitled *New Medical Physics*. It constitutes supplement to 1, containing revised or additional material.

PHYSIOLOGY

SEE ALSO Chemistry and biochemistry; Endocrinology Food and nutrition.

Bibliographies, Indexes abstracts

1463

Berichte über die gesamte Physiologie und experimentelle Pharmakologie. Berlin. 1 1920+

Continuation of the *Zentralblatt für Biochemie* (no. 851) of the *Jahresbericht Tier-Chemie* (o. 843) of the *Jahresbericht animalischen Physiol gie* (no. 1464) and of the abstract section of no. 1466. V 1-2 as *Berichte über die gesamte Physiologie* Beginning 35, 1926, forms Abt. B of *Berichte über die gesamte Biologie* Published by the Deutsche Pharmakologische Gesellschaft and the Deutsche Physiologische Gesellschaft. Very comprehensive abstract journal, especially good for foreign literature. Abstracts appear promptly The references abstracted here are also published as classified bibliography *Jahresbericht Physiologie und experimentelle Pharmakol gie* (previously entitled *Jahresbericht über die gesamte Physiologie und experimentell Pharmakologie*) Suspended 1944-47

1464

Jahresbericht über die Fortschritte der animalischen Physiologie. Stuttgart, 1 22 1892 1913/19 (published 1894-1922)

Supersedes the physiological part of the *Jahresberichte Anatomie und Physiologie* (no. 639) V 1-20 as *Jahresbericht über die Fortschritte der Physiologie* Classified bibliography with a few very brief abstracts. Continued in *Berichte Physiologie* (no. 1463)

1465

Physiological Abstracts. London, 1-22, 1916-37

Published by the Physiological Society (Great Britain and Ireland) the American Physiological Society *et al.* Fairly comprehensive abstract journal. Continued in Section A, III, of *British Abstracts* (no. 835)

1466

Zentralblatt für Physiologie. Wien, 1-34 1887 1921

Published by the Deutsche Physiologische Gesellschaft and the Physiologische Gesellschaft, Berlin. Contains few original articles, but chiefly abstracts. *Bibliographia physiol gica, ser 3, 1-9,* was published as supplement to this journal. The abstract sec-

tion of the *Zentralblatt* was continued in no. 1463.

SEE ALSO *Année biologique* (no. 766); *Bericht über die Fortschritte der Anatomie und Physiologie* (no. 642); *Biological Abstracts* (no. 768b) *British Abstracts of Medical Sciences* (no. 87); *British Chemical and Physiological Abstracts* (no. 836) Section A, III *Excerpta medica* (no. 90) Section II, *International Catalogue of Scientific Literature* (no. 6) Section Q· *Jahresberichte über die Fortschritte der Anatomie und Physiologie* (no. 639) *Tsentral'nyi* (no. 131) Seriia A.

SEE ALSO Abstract, review or bibliographic sections of *Journal de physiologie et de pathologie générale*

Reviews

1467 *

Annual Review of Physiology Stanford Univ Calif., v 1 1939+

Published by the American Physiological Society Reviews with good bibliographies.

1468

Ergebnisse der Physiologie, biologischen Chemie und experimentellen Pharmakologie. Wiesbaden, v 1 1902+

Good review journal with bibliographies similar to *Physiological Reviews* (no. 1469) Suspended 1945–49

1469 *

Physiological Reviews. Baltimore, v.1 1921+

Published by the American Physiological Society Excellent review articles with comprehensive bibliographies. Cumulative index for 1 15

Biographies

1470

Sorling, William. Some apostles of physiology London. Waterlow 1902. 129p

A handsome volume, with fine portraits and brief biographies of physiologists from Vesalius to Huxley Considering its limited scope, it is very expensive

Histories

1471

Bastholm, Eyvind B. M. M. The history of muscle physiology from the natural philosophers to Albrecht von Haller København Munksgaard, 1950. 256p. (*Acta historica scientiarum naturalium et medicinalium* 7)

Illustrated account with analyses of the contents of contributions to the subject.

1472

Foster Sir Michael. Lectures on the history of physiology during the sixteenth, seventeenth and eighteenth centuries. Cambridge: Univ Pr 1901. 310p. (Cambridge biological series.)

Excellent history

1473

Franklin, Kenneth J A short history of physiology 2. ed. London: Staples, [1949] 147p.

First edition appeared in the Short History Series.

1474

Fulton, John F Physiology New York: Hoeber 1931 141p. (Clio medica, no.)

With bibliography

1475

Fulton, John F ed. Selected readings in the history of physiology Springfield, Ill. Thomas, 1930. 317p.

Excerpts from original writings with bibliographic material concerning those who have made contributions to the subject.

1476

Rothschuh, Karl E. Geschichte der Physiologie. Berlin Springer 1953. 249p (Lehrbuch der Physiologie in zusammenhängenden Einzeldarstellungen, hrsg von Wilhelm Trendelenburg und Erich Schütz.)

From ancient times through the nineteenth century Less emphasis on British and American developments because other writers have covered them and because literature of the war years was not available. Contains 123 clear illustrations, mostly portraits 432 selected references.

SEE ALSO Izquierdo (no. 416)

Encyclopedias guides handbooks

1477

Bethe Albrecht Th. J Bergmann, Gustav von, *et al* eds. Handbuch der normalen und pathologischen Physiologie, mit Berücksichtigung der experimentellen Pharmakologie. Berlin Springer 1925–32. 18v in 25.

The most comprehensive work on the subject. Extensive bibliography in footnotes. All except 2, 8 pt. 1 and v 17 are out of print.

1478

Buddenbrock, Wolfgang E. R. von. Vergleichende Physiologie. Basel: Birkhäuser 1950+ 6v (Lehrbücher und Monographien aus dem Gebiete der exakten Wissenschaften. Reihe der experimentellen Biologie, Bd. 6–11.)

Volumes not issued in sequence: Bd. 1 Sinnesphysiologie, [3. ed.] 1952, Bd. 2, Nervenphysiologie, [3. ed.] 1953; Bd. 3, Atmung, Blut, Erfolgsorgane, [3. ed.] in preparation; Bd. 4, Hormone, 1950, Bd. 5, Wasserhaushalt, Mineralhaushalt, Verdauung, in preparation Bd. 6 Drüsen, Exkretion, in preparation Supersedes the author' *Grundriss der vergleichenden Physiologie* 2. Aufl. (Berlin: Borntraeger 1937–39) of which 1–2 only had been published at the outbreak of World War II. An exhausti treatise, based on thorough examination of vailable literature. Full bibliographies.

1479

Roger Georges E. H., and Binet, Léon, eds. Traité de physiologie normale et pathol gique. Paris: Masson, 1926–40. 1 in 13.
Volumes not issued in order (1 1933) Comprehensive. Bibliographic citations. Illustrations not so good as in Bethe and Bergmann (no. 1477) The following four volumes only ha had second edition published: v 3, 1928 (2. éd., 1939); 4 1928 (2. éd., 1939) 7 1926 (2. éd 1934) v 11 1927 (2. éd 1934)

PLAGUE

Histories

1480

Campbell, Anna M. The black death and men of learning. New York: Columbia Univ Pr., 1931. 210p. (History of Science Society Publications no. 1)
A well-documented history of the plague in the fourteenth century with bibliography

1481

Crawfurd, Sir Raymond H P Plague and pestilence in literature and art Oxford Clarendon Pr 1914 222p.
Well illustrated.

1482

Nohl, Johannes. The black death T by C. H. Clarke. London Allen & Unwin, [1926] 284p.
Readable general survey

1483

Sticker Georg. Abhandlungen aus der Seuchengeschichte und Seuchenlehre. Bd. 1 Die Pest. Giessen Töpelmann, 1908–10. 2 pt. in 1
Detailed nd comprehensive, from the earliest times through time of publication. W th bibliography No index.

POISONS AND POISONING

SEE ALSO Pharmacology and pharmacy· for legal aspects, SEE Jurisprudence, medical.

Bibliographies, indexes abstracts

1484

Brous, Florence A. Bibliography and survey on lead poisoning with particular reference to packaging. [New York] Technical Committee of the Packaging Institute, 1943. 350p.
Extensive classified list; no index.

1485

Harmon, Ralph W nd Pollard, Cash B. Bibliography of animal enoms. Gainesville: Univ of Florida Pr 1948. 340p.
The 4,157 entries chronologically arranged with author index.

Hi tories

1486

Lewin, Louis. Die Gifte in der Weltgeschichte; toxikologische, allgemeinverständliche Untersuchungen der historischen Quellen. Berlin Springer 1920. 596p.
Sections on development in early times symptoms; antidotes legislation; poisoning by physicians or laymen through drugs· u usual methods of poisoning· suicide· arsenic; famous people who were poisoners or poisoned women as poisoners; in the church; war Well documented.

Encyclopedia guides, handbooks

1487

Barnes, John M. Toxic hazards of certain pesticides to man, together with select bibliography on the toxicology of pesticides in men and mammals. Geneva World Health Organization, 1953 129p. (World Health Organization, Monograph series no. 16.)
Discussion, with bibliography of 689 items of the past ten years.

1488

Browning, Ethel. Toxicity of industrial organic solvents (revised i consultation with the Toxicology Committee) London H. M. S O 1953. 411p. (Gt. Brit. Medical Research Council. Industrial Health Research Board Report no. 80, rev ed., 1952.)
Summarizes available information. Extensi bibliographies to 1948.

1489

Sax, Newton Irving, *et al.* Handbook of dangerous materials. New York Reinhold Pub. Corp., 1951 848p.

1511
Progress in Clinical Psychology New York, 1 1946-51+
Informative reviews. Full bibliographies.

1512 * *
Progress in Neurology and Psychiatry; an annual review New York, v 1, 1944-45+
Reviews with bibliographies.

Biographies

1513 *
American Psychiatric Association. Biographical directory of fellows and members. New York The Association, 1950 877p.
Good biographies, with bibliographies. Chiefly American, though members in Canada and other countries are included. Geographic index. Revised irregularly The Association also issues an annual *List of fellows and members.*

1514
American Psychoanalytic Association. Membership roster New York, 1946+ $1
Revised annually Alphabetic and geographic lists of members, with addresses. Current issue, 1953-54

1515
Haymaker Webb, ed. The founders of neurology one hundred and thirty-three biographical sketches prepared for the Fourth International Neurological Congress in Paris with the bibliographical and editorial assistance of Karl A. Baer Springfield, Ill Thomas, [1953] 479p.
Men of the nineteenth and twentieth centuries.

1516
Kirchhoff Friedrich A T Deutsche Irrenärzte Einzelbilder ihres Lebens und Wirkens Berlin Springer 1921-24 2v
German psychiatrists chiefly of the eighteenth and nineteenth centuries. Out of print

See also Directory of medical specialists (no. 781)

Histories

1517
American Psychiatric Association. One hundred years of psychiatry New York Columbia Univ Pr 1944 649p.
Chiefly devoted to America By various authors, with bibliographic notes.

1518
Ballance, Sir Charles A. A glimpse into the history of the surgery of the brain. London Macmillan, 1922 110p
A brief sketch with bibliographic notes

1519
Bromberg, Walter The mind of man the story of man's conquest of mental illness. New York. Harper 1937 323p.
Readable history with bibliography Chapters on witchcraft, demonology, faith healers, hypnotism, the development of modern psychiatry and psychology

1520
Castiglioni, Arturo. Adventures of the mind. Tr from the Italian by V Gianturco. New York: Knopf, 1946. 428p.
History of magic and its psychiatric manifestations through the present day with discussion of the application of psychiatry today Bibliography

1521
Deutsch, Albert. The mentally ill in America history of their care and treatment from colonial times. 2. ed. Garden City N Y Doubleday Doran, 1938. 530p.
General survey with bibliography

1522
Laignel-Lavastine, Maxime, and Vinchon, John. Les maladies de l'esprit et leurs médecins du XVI^e au XIX^e siècle; les étapes des connaissances psychiatriques de la renaissance à Pinel. Paris Maloine, [1930] 377p
Illustrated story No index

1523
Lewis, Nolan D. C. A short history of psychiatric achievement with a forecast for the future. New York Norton, [1941] 275p.
Devoted chiefly to the nineteenth and twentieth centuries with brief survey of the earlier centuries. With bibliography

1524
Neuburger Max Die historische Entwicklung der experimentellen Gehirn- und Rückenmarksphysiologie vor Flourens. Stuttgart: Enke, 1897 361p
Detailed, well-documented study from the time of Willis.

1525
Oberndorf Clarence P A history of psychoanalysis in America New York Grune & Stratton, 1953 280p
Chronologic story Useful lists in appendix chronologic outline brief biographic notes former officers, meetings, and approved and affiliate societies of the American Psychoanalytic Association Congresses of International Psycho-analytical Association.

1526
Sachs, Ernest. The history and development of neurological surgery [New York]: Hoeber [1952] 158p. (Yale University School

of Medicine. Department of the History of Medicine. Publication no. 29)

Brief sketch with lengthy bibliography

1827

Selling, Lowell S. Men against madness. New York Greenberg, [1940] 342p.

Popular history of the care of the mentally ill.

1828

Temkin, Owsei. The falling sickness a history of epilepsy from the Greeks to the beginnings of modern neurology Baltimore: Johns Hopkins Pr 1945 380p.

Well documented illustrated study through Hughlings Jackson and Charcot. With bibliography

1829

Walker A. Earl, ed. A history of neurological surgery Baltimore Williams & Wilkins, 1951 583p.

Eighteen chapters by different authors on various phases. With biographies and lengthy bibliography

1830

Whitwell, James R. Historical notes on psychiatry London Lewis, 1936. 252p.

Early history through the end of the sixteenth century with chronology

1831

Zilboorg, Gregory and Henry George W A history of medical psychology New York Norton, [1941] 606p.

A documented, chronologic history from earliest times by Zilboorg, with two chapters on organic mental diseases and mental hospitals by Henry

Encyclopedias, guides, handbooks

1832

American Psychiatric Association, Committee on Nomenclature and Statistics. Diagnostic and statistical manual mental disorders. Washington The Association, Mental Hospital Service, 1952. 130p.

Includes reprint of the section on "Diseases of the Psychobiologic Unit from the 4 ed. of the *Standard nomenclature of diseases and operations* 1952, definitions of the terms used in it, requirements for the recording of psychiatric conditions, and guide to statistical reporting.

1833

Ariëns Kappers, Cornelius U., Huber G. C and Crosby E. C. The comparative anatomy of the nervous system of vertebrates, including man. New York Macmillan, 1936. 2v

Exhaustive study one of the best reference works in English. Profusely illustrated. Excellent bibliographies. Not merely translation of the German edition since it includes additional material.

1834

Bumke, Oswald, ed. Handbuch der Geisteskrankheiten. Berlin Springer 1928–32. 11 and Supplement 1, 1939+ (?)

One of the most comprehensive source books.

1835

Bumke, Oswald, and Foerster Otfried, eds. Handbuch der Neurologie. Berlin Springer 1935–37 17 in 18. Ergänzungswerk, 1–2, 1940.

One of the most comprehensive works. Some chapters in English. Excellent bibliographies.

1836

Conel, Jesse L. The postnatal development of the human cerebral cortex. Cambridge Harvard Univ Pr 1939–51. 4v

A general survey with some 400 plates. V 1 the cortex of the newborn, 2, the one month infant; 3, the three-month infant and v 4, the six month infant.

1837 *

Gibbs, Frederic A., and Gibbs, Erna L. Atlas of electroencephalography 2. ed. Cambridge, Mass. Addison-Wesley Pr 1950+ 3v

V 1 Methodology and controls; 210 plates of normal recordings with bibliography V 2, Epilepsy (1952) with bibliography V 3, Nonparoxysmal disorders, in preparation.

1838

Hoche, Alfred E., ed. Handbuch der gerichtlichen Psychiatrie; bearb. von G Aschaffenburg, H. W Gruhle, A. Hoche, J. Lange. Hrsg. von A. Hoche. 3. Aufl. Berlin: Springer 1934. 567p.

Legal and clinical bases of criminal psychiatry; civil code. Still useful.

1839 *

Penfield, Wilder G., ed. Cytology and cellular pathology of the nervous system. New York Hoeber 1932. 3v

The best and most comprehensive reference work in English on histology of the nervous system. Profusely illustrated, with good bibliographies. Out of print.

1840

Porot, Antoine, *et al.* Manuel alphabétique de psychiatrie clinique thérapeutique et médico-légale. Paris: Presses Universitaires de France, 1952. 436p.

Encyclopedic signed, detailed definition

1541
Riley Henry A. An atlas of the basal ganglia, brain stem and spinal cord based on myelin stained material. Baltimore: Williams & Wilkins, 1943. 708p.

Based on photography not on drawings. Therefore anatomic structures are faithfully reproduced, not interpreted by an artist.

1542
U.S. National Institute of Mental Health. Biometrics Branch. Patients in mental institutions. Washington: Public Health Service, 1938+ (published 1941+)

Formerly published by the U.S. Bureau of the Census. Irregular before 1935 annual since. Covers all types of institutions for the mentally ill, public and private. Includes statistics on patients, personnel employed, and expense of operation.

1543
V lliger Emil. Atlas of cross section anatomy of the brain, guide to the study of the morphology and fiber tracts of the human brain. Fifth section of Emil Villiger's *Brain and spinal cord*. 14. ed., rev by Eugen Ludwig. Atlas further rev by A. T Rasmussen. New York Blakiston, 1951 63 plates.

Drawings not so detailed as in Riley (no. 1541) Material added from the Department of Anatomy University of Minnesota.

1544
Weider, Arthur ed. Contributions toward medical psychology: theory and psychodiagnostic methods. New York. Ronald Pr [1953] 2v

Includes descriptions by outstanding authors of scales and tests for many disorders.

SEE ALSO *Traité de médecine* (no. 519) XV and XVI.

Directories

1544.1
American Psychiatric Association. Committee on Medical Education. Psychiatric training in the United States and Canada. A descriptive directory Washington The Association, 1953 97p.

Institutions described include psychiatric residencies in the United States and Canada; facilities for training i psychoanalysis and child psychiatry

1545 *
National Association for Mental Health, New York. Directory of psychiatric clinics and other resources in the United States. [10. ed] New York The Association, [1952] 138p. $1.25

Listed by state as follows. community psychiatric clinics mental health associations (state and local); state institutions for the mentally ill, state governmental departments; and Veterans Administration psychiatric hospital facilities. Name and address only Revised frequently Previously issued by National Committee for Mental Hygiene.

SEE ALSO U.S. Children's Bureau (no. 1396)

Dictionaries

1546 * *
Hinsie, Leland E., and Shatzky Jacob. Psychiatric dictionary with encyclopedic treatment of modern terms. 2. ed. New York: Oxford Univ Pr 1953. 781p.

Pt. I (p.1–560) is an unchanged reprint of the first edition of 1940, which was excellent and comprehensive for that time. Pt. II (p. 561–781) is a supplement to Pt. I providing in a second alphabet some 900 new definitions. Many additional new terms are introduced merely as cross references to the frequently outmoded terms and definitions in Pt. I. No consideration is given to the revised nomenclature for mental disorders accepted by the American Psychiatric Association (no. 1532) Numerous citations to sources.

1547
Hutchings, Richard H. A psychiatric word book a lexicon of terms employed in psychiatry and psychoanalysis designed for students of medicine and nursing and psychiatric social workers. 7 ed. Utica, N.Y.: State Hospitals Pr 1943. 255p.

Pocket dictionary

1548
Kahn, Samuel. Psychological and neurological definitions and the unconscious. Boston: Meador 1940 19p.

Glossary of 591 terms, definitions from the psychoanalytic viewpoint. Extensive bibliography Out of print.

1549
Robbins, Samuel D. A dictionary of speech pathology and therapy Cambridge, Mass. Sci-Art Publishers, [1951] 112p.

Contains terms not found in general medical and psychologic dictionaries. Full definitions.

1550
Strachey Alix. A new German-English psychoanalytical vocabulary; [rev ed.] London Baillière, Tindall & Cox 1943. 84p. (Research Supplements to the International Journal of Psycho-Analysis, no. 1)

Published for the Institute of Psycho-Analysis. Supersedes Ernest Jones' *Glossary for the use of translators* issued as a supplement to the *International Journal of Psycho-Analysis*, no. 1 1923.

PSYCHOLOGY

For abnormal psychology clinical psychology and psychoanalysis, see Psychiatry and neurology

Bibliographies, indexes abstracts

1551

"Bibliographie der deutschen und ausländischen Literatur über Psychologie, ihre Hilfswissenschaften und Grenzgebiete, 1889–1941. *Zeitschr Psychol. Physiol. Sinnesorg 1–155* (1890–1943)

Annual. Title varies. Not issued for the years 1915–23. For 1924 to 1941 only the German literature is covered in the *Zeitschrift*. The foreign literature for 1926 to 1929 appears in *Arch. ges. Psychol 62–79* (1928–31) Broadly classified. Occasionally contains "Verzeichnis der Zeitschriften, arranged by abbreviations with full titles and addresses (see 97 120, and 137) For period, it matched item for item with *Psychological Index*.

1552

Caillet, Albert L. Manuel bibliographique des sciences psychiques ou occultes. Paris: Dorbon, 1913. 3v

Exhaustive catalog with notes and brief biographies. Includes many works of medical men.

1553

Daniel, Robert S., and Louttit, Chauncey M. Professional problems in psychology New York: Prentice Hall, 1953. 416p.

Particularly useful to the professional psychologist, graduate student, and librarian Surveys the psychological literature and its tools. Discusses the writing and publication of papers. Includes an annotated list of reference books, list of journals, glossary of abbreviations useful to the psychologist, and a list of sources for books, tests, apparatus, and supplies. Supersedes in part Louttit' *Handbook of psychological literature* 1932.

1554

Harvard University The Harvard list of books in psychology (Rev ed.) compiled and annotated by the psychologists in Harvard University Cambridge, Mass. Harvard Univ Pr 1949. 77p.

A classified listing of 612 books considered to be of value to students, psychologists, and laymen.

1555

National Research Council. Research Information Service. Bibliography of bibliographies on psychology 1900–1927 Compiled by C. M. Louttit. Washington: The Council, 1928. 108p. (Bulletin of the National Research Council, no. 65.)

Author listing of 2,134 bibliographies, including significant ones appended to book and journal articles.

1556

Psychological Abstracts. Lancaster Pa., 1 1927+

Issued by the American Psychological Association. From 1921 to 1927 in *Psychological Bulletin*. A classified list. Besides all aspects of psychology it includes physiology of the nervous system, emotion, psychiatry sleep, psychoanalysis, dreams, hypnosis, functional disorders of the nervous system, psychical research, adolescence, and crime and delinquency A key to abstracts of earlier literature will be found in the supplement to *Psychological Index* (no. 1557) whose bibliographic services this continues after 1935.

1557

Psychological Index. Princeton, N J no. 1–42, 1894–1935

Issued by the American Psychological Association in connection with the *Psychological Review* A classified index. Includes references on anatomy physiology and disorders of the nervous system. After 1935 continued in *Psychological Abstracts* (no. 1556) For period, it matched item for item with *Bibliographie der deutschen und ausländischen Literatur* Further details can be found in Winchell.

1558

Scott, Joseph W and Smith, F V A handlist of psychology periodicals in the learned libraries of Great Britain, *Journal of Documentation 6* (1950), 152–66.

Lists 179 periodicals with holdings of British libraries.

SEE ALSO abstract, review or bibliographic sections of *Année psychologique Clearing house Bulletin of Research in Human Organization Encéphale International Journal of Psychoanalysis Journal of Mental Science Psychological Bulletin Quarterly Journal of Child Behavior Zentralblatt für Psychotherapie*

Reviews

1559

Annual Review of Psychology Stanford Univ Calif., 1, 1950+
Published by Annual Reviews, Inc. Brief review articles with bibliographies. Much medical material.

Biographies

1560

American Psychological Association. Directory Washington, 1916+
Appeared 1916–47 as Association's *Year book*. Annual revision. Gives address and, at intervals of some years, fuller professional data. Last such full issue, 1951 has 8,554 entries. With geographic list. American Association for Applied Psychology published *Directory of applied psychologists* 2. ed., 1943. That association now dissolved and members included in this directory

1561

Murchison, Carl A., ed. A history of psychology in autobiography Worcester Mass. Clark Univ Pr 1930–52. 4
Short autobiographies, with portraits, of some 60 prominent psychologists. V 4 edited by committee of the American Psychological Association, Herbert S. Langfeld, chairman.

1562

—— Psychological register Worcester Mass. Clark Univ Pr 1929–52. 2, 1 ed. 580p. 3, 2. ed. 1,269p. (1 never issued.) (International university series in psychology)
International directory of living psychologists arranged by country. Professional data and good bibliographies. V 2 is the first edition of the register V 1, if issued, will be historical, including psychologists from Greek to modern times. V 3 really constitutes second edition, the two editions supplementing each other V 3 out of print.

Histories

1563

Boring, Edwin G. A history of experimental psychology [2. ed.] New York. Appleton-Century-Crofts, [1950] 777p. (Century psychology series.)
The first ten chapters of this edition are little changed. This adds material from 1910 on. With bibliographic notes.

1564

Brett, George S. A history of psychology ancient and patristic. London Allen, 1912 21 3
Detailed history An abridged one-volume edition edited by R. S. Peters was published in 1953 742p.

1565

Dennis, Wayne, ed. Readings in the history of psychology New York Appleton-Century-Crofts, [1948] 587p. (Century psychology series.)
Sixty-one excerpts, from Aristotle to Hull. Source book for the college student. Overlaps Rand's *Classical psychologists* Boston, [1912] Skips from Aristotle to Galileo, with emphasis on the nineteenth and twentieth centuries.

1566

Flugel, John C. A hundred years of psychology 1833–1933 with additional part on developments, 1933–1947 2. ed. London Duckworth, [1951] 424p. (The hundred years series.)
Chronologic survey with bibliography

1567

Murphy Gardner Historical introduction to modern psychology Rev ed. New York. Harcourt Brace, 1950. 466p.
Includes contemporary psychologic systems and some representative research areas.

1568

Pillsbury Walter B. The history of psychology 2. ed. Ann Arbor Mich. Wahr [1937] 326p.
Short history

1569

Roback, Abraham A. History of American psychology New York: Library Publishers, [1952] 426p.
Readable study

Encyclopedia guides handbooks

1570

Carmichael, Leonard, ed. Manual of child psychology New York. Wiley 1946. 1,068p.
Research in the scientific psychology of human development, by many authors. For specialists, research workers, and advanced students.

1571 *

Fryer Douglas H and Henry Edwin R., eds. Handbook of applied psychology New York Rinehart, [1950] 2
Comprehensive survey detailed account of specialization, organization and administration of professional psychology *Includes* child psychology clinical psychology and subjects of interest to medicine, with bibliography

1572
Harriman, Philip L., ed. Encyclopedia of psychology New York: Philosophical Library [1946] 897p.
Survey providing background material for the investigator advanced orientation for students, and new trends in contemporary psychology for workers in the field. Bibliographies.

1573
Stevens, Stanley S ed. Handbook of experimental psychology New York: Wiley 1951 1436p.
Replaces Murchison handbook, now out of print. Includes physiology and sensory processes. Good bibliographies, diagrams and illustrations.

Dictionaries

1574
Harriman, Philip L. The new dictionary of psychology New York. Philosophical Library [1947] 364p.
Definitions include at times interpretations by authorities. Brief biographies of psychologists. Medical and psychoanalytic terms included. Supplements but does not replace Warren (no. 1575) and Kahn (no. 1548)

1575
Warren, Howard C., ed. Dictionary of psychology Boston. Houghton, [1934] 371p.
Includes numerous tables which are useful for rapid reference, e.g., on phobias, reflexes, and terms relating to the human body and central nervous system, arranged topographically French and German glossary

PUBLIC HEALTH EPIDEMIOLOGY HYGIENE SANITATION

SEE ALSO Bacteriology mycology parasitology viruses; Cholera Economics, medical Industrial medicine and hygiene; Leprosy Malaria Plague; Skin and venereal diseases; Smallpox Social medicine Social welfare, Statistics Tropical medicine T berculosis; Yellow fever

Bibliographies, indexes abstracts

1576
Bulletin of Hygiene. London, 1 1926+
Supersedes *Sanitation Supplements* in an addition to *Tropical Disease Bulletin* (no. 1872) Published by the Bureau of Hygiene and Tropical Diseases. Excellent abstract journal almost as comprehensive as the *Zentralblatt* (no. 1589) but not quite so good for foreign literature. Good section on infectious diseases. The separate index of countries is useful.

1577
Engineering Index. New York, v 1–4 1884/91–1901/05, [new series] 1 1906+
Many references on public health, especially on water purification and water supply For further details, see Winchell.

1578
Freidlin, S. Ia. Bibliografiia sovetskogo zdravookhraneniia za 10 let (1938–1947) [Bibliography of Soviet public health for 10 years (1938–1947)] [Leningrad]: Medgiz, 1949 138p
Classified arrangement of 2,065 references (to Russian publications only) List of 155 books and journals indexed.

1579
Great Britain. Dept. of Scientific and Industrial Research. Water Pollution Research Board. Water Pollution Abstracts. London, 1 1928+
V 1 2 in processed form 3–21 1930–48, as *Summary of Current Literature* Concise abstracts from world literature.

1580
Haeser Heinrich. Bibliotheca epidemiographica si catalogus librorum de historia morborum epidemicorum tam generali quam speciali conscriptorum. Jenae- Mauke, 1843. 172p. Additamenta. Collegit Joan. Theoph. Thierfelder Misenae sumptibus C. E. Klinkichtii et fil., 1843. 152p.
Useful checklists.

1581
Hygienische Rundschau. Berlin, 1 32, 1891 1922 Ergänzungsheft. 1922.
Classified abstracts on hygiene, including occupational and infectious diseases, nutrition, etc Continued as *Zentralblatt* (no. 1599)

1582
Jahresbericht uber die Fortschritte und Leistungen auf dem Gebiete der Hygiene. Braunsch eig, 1 31 1883–1913.
Abstract journal published as supplement to *Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege*

1583
National Health Library Periodicals of interest to public health workers New York The Library 1951 22p. Processed. 50 cents.
Useful for many county and state publications not often found in periodical lists. Addresses given This library often issues useful

pamphlets, and libraries interested in public health should ask for lists of material available.

1583.1
Public Health Economics. Ann Arbor Mich., v 1, 1944+
Selected abstracts from newspapers as well as from medical periodicals mostly American, but some foreign sources. List of monographs included.

1584
Public Health Engineering Abstracts. Washington, v 1 1921+
V 1–20 published by the U.S. Public Health Service, Domestic Quarantine Division, Sanitation Section, 21+ by the States Relations Division, Sanitation Section. Early olumes mimeographed current volumes processed. Fairly comprehensive.

1585
U.S. Federal Security Agency Library Federal grants-in-aid in health, social security, education, vocational rehabilitation selected references 1938–1951 Comp. by Ruth Bray and Ruth Strawbridge. Washington The Library 1952 37p Processed.
Not list of grants but rather references to discussions and reports concerning them. A very useful bibliography of material difficult to locate.

1586
U.S. Public Health Service. Publications of the United States Public Health Service. [Rev ed.] January 1927 Washington Govt. Print. Off 1927 129p. (Miscellaneous publications no. 12.)
This valuabl checklist contains list of all books, pamphlets, and series published by the Public Health Service, and is supplemented by occasional subsequent lists.

1587
—— Division of Hospital Facilities and Sanitation. Plumbi g and public health bibliography [Washington] The Service, 1943 43p. Processed.
Useful because the 531 references are often taken from periodicals not usually available in medical libraries. Arranged by author

1588
World Health Organization. Handbook of basic documents. 6. ed. Including amendments approved by the Sixth World Health Assembly May 1953. Geneva. Palais des Nations, 1953. 212p.
Includes constitution, rules of procedur agreements, financial and staff regulations, list of member countries.

1589
Zentralblatt für die gesamte Hygiene mit Einschluss der Bakteriologie und Immunitätslehre. Berlin, 1–52, 1922–41.
Continues *Hygienische Rundschau* (no. 1581) Published by the Berliner Gesellschaft für öffentliche Gesundheitspflege. V 1 19 as *Zentralblatt für die gesamte Hygiene und ihre Grenzgebiete* Very comprehensive includes control of infectious diseases. Especially good for foreign literature.

SEE ALSO *Bibliografia italiana* (no. 1) Section C *Ergebnisse der Hygiene* (no. 747) *Excerpta medica* (no. 90) Section IV *J panese Journal of Medical Sciences* (no. 120G), *Sovetskoe meditsinskoe* (no. 130H and N); *Tsentral'nyi* (no. 131) Serils G *Year Book of Publ Health* (no. 143 O)

SEE ALSO abstract, review or bibliographic sections of *A nales d'hygiène publique industriell et sociale Annali d giene Bulletin Offic International d'Hygiène Publique Revue d'hygiène Rivista italiana d giene Technique sanitaire et municipale*

Reviews

1590
Health and Social Welfare. London, 1944–45+
A yearbook surveying all the health services of the British Commonwealth official directories, and directories of organizations and individuals. Issued by the Todd Publishing Co.

1590.1
Health Yearbook. Stanford Univ Calif., 1943+
Issued 1943–52 as *Health Instruction Year Book*, comp. by Oliver E. Byrd. Contains digests of recent books and articles, for health workers and teachers. Includes social implications, world health problems, safety and school and community health.

Biographies

1591
U.S. Public Health Service. Directory of full time local health units. Washington, 1912+
1912 50 as *local health fficers.* T locate, consult the indexes to each annual olume of *Public H alth Reports* (weekly) 1912–44. Title ares slightly City and county officers are included in the directories for 1916–38, and 1942. In 1932 no lists of any kind were published. List for 1943 last to appear in *Reports.* 1946–50 as *Public H alth*

Reports Supplement no. 194. Revised annually. Since 1951 issued as *Public Health Service Publication* no. 118.

1592

—— Official list of commissioned and other officers of the Public Health Service, July 1 1946. Washington: The Service, 1946. 78p. (Miscellaneous Publication no. 11.)

Includes professional data. List of divisions of the Public Health Service, with officers. Index of individuals, states, cities, and countries. First published, 1891.

1593 * *

—— Bureau of State Services. Directory of state and territorial health authorities. Washington: Govt. Print. Off 1912+

1912–39 in *Public Health Reports.* Title varies. can be found by consulting annual indexes of *Reports* under directories. In 1932 none published. 1944–50 as *Public Health Reports Supplement* no. 180. 1951 issued separately as *Public Health Service Publication* no. 75. Arranged by state.

1594

Walker M. E. M. Pioneers of public health the story of some benefactors of the human race. New York. Macmillan, 1930. 269p.

Readable sketches of 21 men from Sydenham to Sir William Leishman.

Histories

1595

Delmege, James A. Towards national health or health and hygiene in England from Roman to Victorian times. London Heinemann, 1931 234p

A short survey

1596

Fischer Alfons. Geschichte des deutschen Gesundheitswesens. Berlin Herbig, 1933 2

Published by the Arbeitsgemeinschaft sozialhygienischer Reichsfachverbände. Illustrated, well documented.

1597

Frazer, William M. A history of English public health. London Baillière, Tindall & Cox, 1950. 499p.

Excellent, illustrated history

1598

Guy William A. Public health; a popular introduction to sanitary science. Being a history of the prevalent and fatal diseases of the English population. London Renshaw 1874. 342p.

A good history through 1815 with emphasis upon contagious diseases and military sanitation.

1599

Newman, Sir George. The rise of preventive medicine. London: Milford, 1932. 270p.

Chapters on ten phases of the subject, with bibliographic references.

1600

Newsholme, Sir Arthur Evolution of preventive medicine. Baltimore: Williams & Wilkins, 1927 226p.

Short survey through Pasteur

1601

—— The story of modern preventive medicine. Baltimore: Williams & Wilkins, 1929 295p.

A continuation of the previous work.

1602

Ravenel, Mazyck P ed. A half century of public health. New York: American Public Health Association, 1921. 461p.

Historical papers on different phases of public health in this country 1871–1921

1603

Schmeckebier, Laurence F The Public Health Service: its history activities, and organization. Baltimore: Johns Hopkins Pr 1923. 298p. (Institute for Government Research, Service Monograph no. 10.)

Packed with information about the U.S. Public Health Service, still useful since it supplements Williams (no. 1605) not superseded by it. Bibliography

1604

Stern, Bernhard J. Society and medical progress. Princeton, N.J Princeton Univ Pr [1941] 264p.

Excellent study Chapters on. long road to medical science scientific foundations of medicine; rôle of the medical schools the development of the modern hospital urbanization and its effects; income and health conquest of famine; medical advances and social progress; resistances to medical change.

1605

Williams, Ralph C. The United States Public Health Service, 1798–1950. Washington: Commissioned Officers Association of the United States Public Health Service, [1951] 890p.

Detailed and valuable study well illustrated, including the evolution of public health in the U S and public health in the mid-twentieth century With brief bibliography

Epidemics—Histories

1606

Creighton, Charles. A history of epidemics in Britain. Cambridge: Univ Pr 1891–94. 2v

pamphlets, and libraries interested in public health should ask for lists of material available.

1583.1
Public Health Economics. Ann Arbor Mich 1 1944+
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1585 *
U.S. Federal Security Agency Library Federal grants-in-aid in health, social security education, vocational rehabilitation selected references 1938-1951 Comp. by Ruth B ay and Ruth Strawbridge. Washington: The Library 1952. 37p. Processed.
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1586
U.S. Public Health Service. Publications of the United States Public Health Service. [Rev ed.] January 1927 Washington. Govt. Print. Off., 1927 129p (Miscellaneous publications no. 12.)
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1591
U.S. Public Health Service. Directory of full-time local health units. Washington, 1912+
1912-50 as *local health officers.* To locate, consult the indexes to each annual volume of *Public Health Reports* (weekly) 1912-44. Title varies slightly City and county officers are included in the directories for 1916-38, and 1942. In 1932 no lists of any kind were published. List for 1943 last to appear in *Reports* 1946-50 as *Public Health*

1621 ★

Health Information Foundation. An inventory of social and economic research in health. Comp. by Frederick R. Strunk. New York. The Foundation, 1953. 180p.

Sociologic and economic health problems and projects arranged by broad subject groups. Includes health education and industrial health. Lists publications and data both printed and on file. Name and geographic index. Revised frequently

1622

New York Academy of Medicine. Health Education Conference. The epidemiology of health. New York: Health Education Council, 1953. 197p.

Summary of concept underlying new approaches to the promotion of health and prevention of disease by 15 authors. Annotations; bibliography Revised and extended papers presented at the 11th Annual Eastern States Health Education Conference, New York Academy of Medicine, 1951

1623

Rodenwaldt, Ernst R. C. Welt-Seuchen-Atlas World atlas of epidemic diseases. Hamburg: Falk Verlag, 1952+ 2 and supplementary sheets.

Sponsored by the U.S Bureau of Medicine and Surgery Has 52 colored maps, 45 in black and white, with text in English and German Surprint in different colors indicates types of organism causing epidemics. Loose-leaf, so as be removed for comparison. Supplementary sheets will keep information up to date. Based on Heinz Zeiss, *Seuchen-Atlas* (Gotha Perthes, 1942)

1624 ★

Simmons, James S., *et al* Global epidemiology: geography of disease and sanitation. Philadelphia Lippincott, 1944–54

Extensive work planned to cover the entire world. Good bibliographies. V 1 1944 India and the Far East; the Pacific area V 2, 1950, Africa and the adjacent islands. V 3 1954, The Near and Middle East

1625 ★

U.S. President's Commission on the Health Needs of the Nation. Building America's health a report to the President Washington Govt. Print Off., 1952 53 5v

Major findings and recommendations of the Commission.

1626

U.S. Public Health Service. Bureau of State Services. Distribution of health services in the structure of state government. 1950 Washington Govt. Print Off., [1952]+ 4 (U.S. Public Health Service. Publication no. 184.)

Comparisons of the various states' public health organization, methods of administration, scope of activities, policies, and resources. Part I, Administrative provisions for state health services, by Joseph W Mountin, Evelyn Flook, and Edward E. Minty Part II, General services and construction of facilities for state health programs. Two more parts will be published III, Personal health services provided by state government, and IV Environmental health and safety services provided by state government.

1627 ★

——Guide to health organization in the United States, 1951, by Joseph W Mountin and Evelyn Flook. [2. ed.] Washington The Service, [1953] 104p. (U.S. Public Health Service. Publication no. 196. Formerly Miscellaneous Publication no. 35)

Outline and description of how federal state, and local health services function, with charts showing public health structure. Bibliography Includes tables on expenditures for health activities, state health laws, and hospital facilities.

SEE ALSO American Public Health Association (no. 1771) Clark and Cumley (no 507 1); Dublin, Lotka, and Spiegelman (no. 1755–56) Dublin and Lotka (no. 1618–19); League of Nations (no 1759); United Nations (no. 1761); World Health Organization, *Annual epidemiological and vital statistics* (no. 1 69) and [*Weekly*] (no. 1770); World Health Organization (no 1726)

Laws and legislation

1628

Commerce Clearing House. Food, drug, cosmetic law service: laws, regulations, rulings, and decisions completely organized and annotated, currently supplemented, and thoroughly indexed. Chicago: Commerce Clearing House, 1939+ Various paging.

The federal food, drug, and cosmetic act of 1938 is reported in full, with congressional committee reports outlined to show the intent of Congress. Regulations issued, editorial comment and digests of court decisions and new developments are included. Loose-leaf therefore up to date. It forms valuable supplement to Dunn and to Kleinfeld and Dunn, (no. 1629–32) but the service charges are too high for the average library

1629

Dunn, Charles W., comp Dunn food and drug laws, federal and state (annotated)

New York. U.S. Corporation Co., 1927–28. 3v Suppl., January 1 1929 228p.

A fundamental work giving complete laws with many notes. Cases of importance in construing the laws are cited.

1630

Dunn, Charles W Federal food, drug and cosmetic act; a statement of its legislative record New York: Stechert, 1938. 1425p.

Act of June 25 1938, stated in full, including the Senate and the House reports, debates, etc., and those of the committees. The discussion of this law is much more complete and thorough than in the Commerce Clearing House loose-leaf index (no. 1628) Of permanent historical value.

1631

Dunn, Charles W comp. Wheeler Lea Act. a statement of its legislative record. New York Stechert, 1938. 517p.

A primary source of information. Of historical significance. Gives the Act in full, its legislative record and the Senate and the House debates and committee hearings. The Wheeler-Lea Act and the Federal Food, Drug and Cosmetic Act constitute a common and closely related legislative program. This book supplements Dunn's studies of the food and drug laws (no. 1629) and Dunn *Federal food drug and cosmetic act* (no. 1630)

1632

Kleinfeld, Vincent A., and Dunn, Charles W Federal food, drug, and cosmetic act; judicial and administrative record 1938–1949 New York. Commerce Clearing House, [1949] 895p.

1632a

——— 1949–1950. Chicago: Commerce Clearing House, [1951] 543p. (Food Law Institute series.)

1632b

——— 1951–52. Chicago: Commerce Clearing House, [1953] 588p. (Food Law Institute series.)

Continues Dunn (no. 1629–31) Guide and source book to opinions rendered under the Act, with digests. Deals with "Trade correspondence" and "Statements of general policy or interpretation" issued by the Administration. References included.

1633

Lumley, William G., and Lumley Edmund. The public health acts annotated, together with the various incorporated statutes and orders of the Minister of Health. 12. ed. [ed.] by Erskine Simes and Charles F Scholefield. London Butterworth. 1950+ 7

An entirely new chronologic arrangement. Not yet complete: includes interpretation of the British laws, instructions for their application, and citations of violation.

1634

World Health Organization. International Digest of Health Legislation. Geneva, v 1 1948+

Replaces the legal sections of the *Bulletin mensuel de l'Office International d'Hygiène Publique* and the *Bulletin of the Health Organization of the League of Nations.* Includes administrative, legislative, and all other aspects of public health including nursing, and maternal and child welfare. Issued in English and French editions, either bound or as collection of separate issues for filing according to subject or country

SEE ALSO Hutton (no. 1741) Johnson (no 1724); *Medical Register* (no. 258)

Directories

1635

Cavins, Harold M. National health agencies; survey with special reference to voluntary associations, including detailed directory of major health organizations. [Washington] Public Affairs Pr [1945] 251p.

Detailed discussion of 14 associations, with directory of 80 others, all in the United States.

1636 *

Goodman, Neville M. International health organizations and their work. London: Churchill, 1952. 327p.

The development of international health work is sketched. The important agencies are discussed Office International d'Hygiène Publique, League of Nations' Health Organization, UNRRA, WHO, and other regional voluntary and intergovernmental agencies, down to the Third World Health Assembly in 1950. Good illustrations and bibliographies make this indispensable.

1637

Gunn, Selskar M and Platt, Philip S. Voluntary health agencies; an interpretive study New York Ronald Pr [1945] 364p.

Study made under the auspices of the National Health Council, Committee for the Study of Voluntary Health Agencies. Covers many of the organizations listed in Cavins, *National health* (no 1635) Statistical tables.

1638 * *

Hatton, Henry American health directory 1952. Washington Public Affairs Pr [1952] 96p.

Society *Bulletin on Current Literature* monthly subscription $1

1640 *

Riviere, Maya. Rehabilitation of the handicapped a bibliography 1940–1946. New York: National Council on Rehabilitation, [1949] 2

Partly annotated list of 5,000 entries. Includes list of films. Continued in U.S. Office of Vocational Rehabilitation, *Selected rehabilitation abstracts* (no. 1661)

1641

U.S. Office of Vocational Rehabilitation. Division of Program Services. Selected rehabilitation abstracts. Washington, 1–6 1947–53. (U.S. Office of Vocational Rehabilitation. Rehabilitation service series, no 26) Proc essed.

Highly selective, but provides some material difficult to locate. Books also abstracted. Continues as a new feature in the *Journal of Rehabilitation*.

SEE ALSO abstract, review, or bibliographic sections of *Occupational Therapy and Rehabilitation*.

Reviews

1642

"International Review of Physical Medicine and Rehabilitation, February 1948+ 1 *Occupational Therapy and Rehabilitation* 27–30, 1948–51 and *American Journal of Physical Medicine* 31 1952+

Brief review articles and abstracts. Has list of journals covered. Good coverage of foreign literature.

Encyclopedias, guides handbooks

1643 *

American Medical Association. Council on Physical Medicine and Rehabilitation. Handbook of physical medicine and rehabilitation Philadelphia Blakiston, 1950. 573p

Previous edition entitled *Handbook of physical medicine*. Review of methods, with bibliography

Directories

1644

Central Council for the Care of Cripples Summary of legislation and directory of organizations for the care of the physically handicapped. London: Heinemann, 1951 139p.

While chiefly of local interest, contains discussion of National Health Service Act. Good administrative charts and much general information.

1645 *

Occupational Therapy Yearbook. New York, 1 1945+

Published by American Occupational Therapy Association. Alphabetic list of registered therapists (3,227 in 1952 volume) with geographic list of hospitals, institutions, or agencies. List of occupational therapy schools. Continues Association's *National Directory of Qualified Occupational Therapists* 1932–44.

1645.1

Redkey Henry Rehabilitation centers in the United States: compilation of information submitted by 40 rehabilitation centers for the First National Conference on Rehabilitation Centers, Dec 1–3, 1952. Chicago: National Society for Crippled Children and Adults, 1953. 128p.

1646

Rusk, Howard A., and Taylor Eugene J. A directory of agencies and organizations concerned with rehabilitation and services to the handicapped [New York] New York Times, 1947 133p.

Includes federal and voluntary programs, objectives, and publications issued. Lists of state societies affiliated with the National Society for Crippled Children and Adults and of state rehabilitation agencies under Federal Office of Rehabilitation. For latter see also list in *Occupational Therapy and Rehabilitation* 26, 1947 p.285–98, arranged by state, then city. Supplemented by U.S. Office of Vocational Rehabilitation *Directory rehabilitation centers* 1 ed., Washington, 1953, 12p., which has more limited coverage.

RELIGION AND MEDICINE

Bibliographies, indexes abstracts

1647

Friedenwald, Harry. Jewish luminaries in medical history and catalogue of works bearing on the subject of Jews and medicine from the private library of. Baltimore: Johns Hopkins Pr 1946. 199p.

Checklist with brief biographic notes. No subject index.

Biographies

1648

Kagan, Solomon R. Jewish medicine. Boston: Medico-Historical Pr 1952. 575p.

Brief biographies three fourths devoted to the modern period, arranged by specialty and dealing with many living men. To some extent supplements his *Jewish contributions* (no. 287)

Histories

1669
Brim, Charles J Medicine in the Bible, the Pentateuch, Torah. New York: F oben Pr 1936. 384p.

1670
Dawson, George G Healing· pagan and Christian. London Society for Promoting Christian Knowledge, [1935] 322p.
A history colored by the author's views on religious healing.

1671
Delaunay Paul. La médecine et l'église contribution à l'histoire de l'exercice médicale. Paris Éditions Hippocrate, 1948 135p.
A well-documented study chiefly devoted to the history of the subject in France

1672
Friedenwald, Harry The Jews and medicine; essays. Baltimore· Johns Hopkins Pr 1944 2 (Publications of the Institute of the History of Medicine, Monographs no. 2 and 3.)
A valuable collection of articles on the subject reprinted from various journals biographic, bibliographic, and historical. With bibliography

1673
Jayne, Walter A. The healing gods of ancient civilizations. New Haven Yale Univ Pr [1925] 569p.
Useful work, with bibliography

1674
Major Ralph H. Faiths that healed New York Appleton Century 1940 290p.
Popular account.

1675
Pazzini, Adalberto. I santi nella storia della medicina. Roma "Mediterranea, 1937 605p.
Detailed work, with bibliography

1676
Preuss, Julius. Biblisch-talmudische Medizin. 3. Aufl. Berlin. Karger 1923. 735p.
Detailed study with bibliography

1677
Rattray Alexander Divine hygiene; sanitary science and sanitarians of the sacred scriptures and Mosaic code. London: Nisbet, 1903. 2v
Exhaustive work.

1678
Rosenthal, Oskar Wunderheilungen und ärztliche Schutzpatrone in der bildenden Kunst. Leipzig· Vogel, 1925 42p. 102 plates.
Useful for illustrations.

1679
Snowman, Jacob. A short history of Talmudic medicine. London J Bale, Sons & Danielsson, 1935 94p. (Short history series.)

REPRODUCTIVE SYSTEM

see Sex and reproductive system.

RESEARCH

Histories

1680
Shryock, Richard H. American medical research, past and present. New York. Commonwealth Fund, 1947 350p. (Studies of the New York Academy of Medicine Committee on Medicine and the Changing Order)
Well-documented study giving: formative influences; support; economic and social background; research trends and fields; the future. Another interesting study on this subject is Alan Gregg's *The furtherance of medical research* (New Haven. Yale Univ Pr 1941)

Encyclopedias, guides, handbooks

1681
Green, David E., and Knox, W Eugene, eds. Research in medical science. New York: Macmillan, 1950. 492p.
By specialists in 26 fields, with emphasis on the contributions of nonmedical research workers.

1682
Stewart, Irvin. Organizing scientific research for war; the administrative history of the Office of Scientific Research and Development. Boston Little, Brown, 1948. 358p.
Discusses Committee on Medical Research of OSRD and other medical material.

1683
U.S. Department of Defense. Research and Development Board. Committee on Medical Sciences. Facilities for research and development in the medical sciences within the Department of Defense. Washington, 1949 73p. (Its Digest series no 39 MB 35/1)
Detailed information about 22 facilities in the United States. Information on the Prosthetic Research Laboratory, Climatic Research Laboratory Medical Nutrition Labo

ratory, Naval Medical Research Institute, School of Aviation Medicine, etc.

RESPIRATORY ORGANS

SEE ALSO Gastroenterology; Tuberculosis.

Bibliographies, indexes, abstracts

SEE abstract, review, or bibliographic sections of *Archives médico-chirurgicales de l'appareil respiratoire; Archivio italiano per le malattie della trachea; Bronchoscopie oesophagoscopie et gastroscopie*

Reviews

1683.1

Andrewes, Christopher H., *et al.* Influenza, review of current research. Geneva: World Health Organization, 1954. 223p. (World Health Organization Monograph series, no. 20.)

Includes: papers originally published in *Bulletin of the World Health Organization* 8 (1953) 591–824; directory of WHO influenza centers and observers; and selected bibliography of 396 references.

RHEUMATIC DISEASES

Bibliographies, indexes, abstracts

SEE abstract, review, or bibliographic sections of *Annals of the Rheumatic Diseases; Revue du rhumatisme; Zeitschrift für Rheumaforschung*

Encyclopedias, guides, handbooks

1684 ★

Hollander, Joseph L., ed. Comroe's arthritis and allied conditions. Completely revised and rewritten. 5. ed. Philadelphia: Lea & Febiger, 1953. 1,103p.

Entire field of rheumatic diseases covered in great detail by 18 specialists. 399 illustrations and extensive bibliographies.

Directories

1685

Institutional care facilities in the United States for rheumatic fever and rheumatic heart disease (children and adults). [New York]: American Council on Rheumatic Fever of the American Heart Association, 1949. 44p. Suppl., 1950. 23p. Processed.

Published by the Council in cooperation with the Helen Hay Whitney Foundation. Arranged by state; no index.

1686

Ligue Internationale contre le Rhumatisme. Year book, 1950. [Copenhagen: Ligue Internationale contre le Rhumatisme] 1950. 155p.

Geographic listing of associations of rheumatologists throughout the world, with membership lists.

RHINOLOGY

SEE Oto-rhino-laryngology

SANITATION

SEE Public health, epidemiology, hygiene, sanitation.

SEX AND REPRODUCTIVE SYSTEM (INCLUDING MARRIAGE AND PROSTITUTION)

SEE ALSO Obstetrics and gynecology; Skin and venereal diseases; Urology

Bibliographies, indexes, abstracts

SEE abstract, review, or bibliographic sections of *Fertility and Sterility; Internationales Centralblatt für die Physiologie und Pathologie der Harn- und Sexual-Organe; Zeitschrift für Sexualwissenschaft.*

Histories

1687

Lacroix, Paul (Dufour, Pierre, *pseud.*) History of prostitution. Tr. by Samuel Putnam. Chicago: Covici, 1926. 3v.

Exhaustive history through the sixteenth century. Originally published in 1851–52.

1688

Sanger, William W. The history of prostitution. New ed. New York: Medical Pub. Co., 1906. 709p.

Detailed history arranged by country. One third about New York.

1689

Scott, George R. A history of prostitution from antiquity to the present day. London: Laurie, [1936] 239p.

Brief survey covering the causes and history of prostitution with section on prostitution in 1936.

1690

Westermarck, Edward A. The history of human marriage. 5. ed. London: Macmillan, 1921. 3v.

Classic, exhaustive study. Includes ethnologic and anthropologic aspect. Published also 1922 by Allerton, New York.

Encyclopedias, guides handbooks

1691
Aberle, Sophie B. D., and Corner, George W. Twenty-five years of sex research. History of the National Research Council, Committee for Research in Problems of Sex, 1922–1947. Philadelphia: Saunders, 1953. 248p.
Emphasizes Committee findings on administrative problems as well as on research. The long list of published reports of investigations constitutes useful bibliography arranged by name of directing investigator.

1692 * *
Dickinson, Robert Latou. Human sex anatomy: topographical hand atlas. 2. ed. Baltimore: Williams & Wilkins, 1949. 145p. and 103 leaves of illustrations. (Medical aspects of human fertility series.)
Pioneer modern reference work.

1693 *
Dickinson, Robert Latou, and Beam, Lura E. The single woman. Baltimore: Williams & Wilkins, 1949. 469p. Reprinted.
A statistical study with case histories.

1694 *
—— A thousand marriages: medical study of sex adjustment. Baltimore: Williams & Wilkins, 1949. 482p. Reprinted.
A statistical study with case histories.

1695
Ellis, Havelock. Studies in the psychology of sex. New York: Random House, 1940. 2v.
Reprint of exhaustive study including historical, normal and abnormal aspects, and sex in relation to sociology. Case histories. Physiology and anatomy not included.

1696
Henry, George W. Sex variants: study of homosexual patterns, with sections contributed by specialists in particular fields. Sponsored by Committee for the Study of Sex Variants. New York: Hoeber [1948]. 1130p.
A thorough and well-documented study.

1697
Hirschfeld, Magnus. Geschlechtskunde auf Grund dreissigjähriger Forschung und Erfahrung bearbeitet. Stuttgart: Puttmann, 1926–31. 5v. Register 232p.
Comprehensive. Includes historical, psychologic, physiologic, and anatomic aspects. Folk customs and pathologic conditions included.

1698 * *
Kinsey, Alfred C., *et al.* *Sexual behavior in the human female.* Philadelphia: Saunders, 1953. 842p.
An exhaustive study from every angle. Based on surveys made by the staff of the Institute for Sex Research, Indiana University and sponsored by the National Research Council's Committee for Research in Problems of Sex. Companion volume to the following (no. 1699).

1699 * *
—— Sexual behavior in the human male. Philadelphia: Saunders, 1948. 804p.
An exhaustive study from every angle. Based on surveys made by the staff of the Institute for Sex Research, Indiana University and sponsored by the National Research Council's Committee for Research in Problems of Sex. Companion volume to preceding (no. 1698).

1700
Young, Hugh H. Genital abnormalities, hermaphroditism and related adrenal diseases. Baltimore: Williams & Wilkins, 1937. 649p.
Practically the only reference work on this subject; 534 illustrations, bibliographies.

SKIN AND VENEREAL DISEASES

Bibliographies, indexes, abstracts

1701 * *
Current Literature on Venereal Disease. Washington: U.S. Public Health Service, Division of Venereal Disease, 1952+. Free.
Continuation of abstract section of former *Venereal Disease Information* and of *Journal of Venereal Disease Information*. Abstracts listed by journal. Quarterly.

1702
Dermatologisches Zentralblatt. Leipzig, 1–23, 1897–1920.
Continued in no. 1704. Useful for foreign literature. Contains some original articles and résumés of various dermatologic societies proceedings, as well as abstracts.

1703
Proksch, Johann K. Die Litteratur über die venerischen Krankheiten. Bonn: Hanstein, 1889–91. 4v. in 3. Suppl. 1900. 835p.
Comprehensive, classified bibliography.

1704
Zentralblatt für Haut- und Geschlechtskrankheiten sowie deren Grenzgebiete. Berlin, 1, 1921+

Published by the Deutsche Dermatologische Gesellschaft. Continuation of no. 1702. Comprehensive abstract journal. Its references were published also as classified bibliography *Jahresbericht Haut- und Geschlechtskrankheiten* 1921–31 (1 entitled *Bibliographie der Haut- und Geschlechtskrankheiten*)

SEE ALSO *Excerpta medica* (no. 90) Section XIII; *Japanese Journal of Medical Science* (no. 120M); *Sovetskoe meditsinskoe* (no. 130F); *Tsentral'nyi* (no. 131) Serial B *Year Book of Dermatology and Syphilology* (no. 143A)

SEE ALSO abstract, review or bibliographic sections of *A M A Archives of Dermatology and Syphilology* *American Journal of Syphilis* *Annales de dermatologie et de syphiligraphie* *Annales des maladies vénériennes* *British Journal of Dermatology* *Dermatologica* *Dermatologische Wochenschrift* *Giornale italiano di dermatologia e sifilologia*.

Biographies

1705
Becher, Paul E. History of the American Dermatological Association in commemoration of its seventy fifth anniversary 1876–1951. New York, Froben Pr 1952. 392p
Historical section and brief biographies of some 300 dermatologists, with portraits Chronologic arrangement, no name index. Lists of officers and meetings chronologically arranged.

1706
Deutsches Dermatologen-Verzeichnis Lebens- und Leistungsschau, hrsg. von Erhard Riecke. 2. Aufl. Leipzig: Barth, 1939 314p.
Earlier edition, 1929 has title *Deutscher Dermatologenkalender* supplement to *Dermatologische Wochenschrift* 1929 Brief biographies of German dermatologists, with few non Germans. Lists directors of dermatologic clinics and dermatologists in the army

Histories

1707
Bloch, Iwan. Der Ursprung der Syphilis; eine medizinische und kulturgeschichtliche Untersuchung. Jena, Fischer 1901 11 2
Detailed study of the early history with bibliographic references. No index.

1708
Buret, Frédéric. Syphilis today and among the ancients. Philadelphia Davis, 1891–95. 3v ill.

General survey through the nineteenth century N index.

1709
Jeanselme, Edouard. "Histoire de la syphilis, son origine, son expansion. In his: *Traité de la syphilis* (no. 1720) Paris, 1931. v 1 p 1–432.
General survey through 1930, with bibliographic references.

1710
Proksch, Johann K. Die Geschichte der venerischen Krankheiten. Bonn Hanstein, 1895 2
Exhaustive history

1711
Pusey William A. The history of dermatology Springfield, Ill., Thomas, 1933. 223p.
General survey with historical index of dermatology

1712
—— The history and epidemiology of syphilis Springfield, Ill. Thomas, 1933 113p.
Short sketch.

1713
Richter Paul "Geschichte der Dermatologie. In Jadassohn, Josef, ed. *Handbuch der Haut- und Geschlechtskrankheiten* (no. 1719) Berlin, 1928, 14[2] p.1–252.
Detailed history with bibliography

1714
Shelley Walter B., and Crissey John T eds. Classics in clinical dermatology with biographical sketches. Springfield, Ill Thomas, [1953] 467p.
Translated excerpts from the writings of Robert Willan to those of the present time, with brief biographies, portraits and illustrations.

1715
Sticker Georg "Entwurf einer Geschichte der ansteckenden Geschlechtskrankheiten. In Jadassohn, Josef, ed. *Handbuch der Haut- und Geschlechtskrankheiten* (no. 1719) Berlin, 1931 23, p.264–603.
Valuable, well-documented study with a section devoted to diseases often confused with venereal diseases in the past.

Encyclopedias, guides, handbooks

1716
Arzt, Leopold, and Zieler, Josef. Atlas der Haut und Geschlechtskrankheiten. Wien Urban & Schwarzenberg, 1949–53. 2 in 11 Lieferungen.
v 1 1949–50, Geschlechtskrankheiten; v 2, 1951 53, Hautkrankheiten. The atlas used

the wealth of clinical material from the Dermatological and Venereal Disease Clinic of the University of Vienna to illustrate the various diseases by colored plates made from water colors.

1717
Darier Jean, et al., eds. Nouvelle pratique dermatologique. Paris: Masson, 1936. 8v
Comprehensive work. Emphasis on diseases, but includes anatomy physiology and histopathology. Still in print.

1718
Jacobi, Eduard. Jacobi' tlas of dermachromes with English text by Henry Mac Cormac 4 ed. London Heinemann, 1931 St. Louis: Mosby 1931 2v
Excellent tlas with 322 illustrations. The English text is not translation but written by MacCormac. Still good, although modern dermatologists now depend largely on actual photographs in color to demonstrate skin conditions.

1719
Jadassohn, Josef, et al. eds. Handbuch der Haut und Geschlechtskrankheiten. Berlin Springer, 1927–34. 23v in 41 Gesamtüber sicht. 1937 68p Supplement to 10, pt. 2, 1938. 110p.
Invaluable, exhaustive study of skin, hair nd nails, including anatomy and physiology and venereal diseases. Splendid illustrations and bibliographies. In print and will be continued.

1720
Jeanselme, Edouard, and Schulmann, Ernest, eds. Traité de la syphilis. Paris Doin, 1931+ 7 in (?)
Very comprehensive. Beautifully illustrated. Good bibliographies. Not yet complete (pt. 2 of 5 dated 1940) V 4 6, 7 not yet published. Still in print

1721
Percival, George H., Drennan, A. Murray and Dodds, T C. Atlas of histopathology of the skin. Edinburgh Livingstone, 1947 494p.
Microscopic changes produced by diseases of the skin 376 macrographs in color with text.

1722 * *
Semon, Henry C. G An atlas of the commoner kin diseases, with 147 plates reproduced by direct colour photography from the living subject colour photography originally directed by Arnold Moritz 4 ed Baltimore Williams & Wilkins, 1953 370p
Diseases in lphabetic order to facilitate rapid reference.

Laws and legislation

1723
American Social Hygiene Association. State laws to protect family health, a summary of state legislation requiring premarital and prenatal examinations for venereal diseases. 1935–1949 3 ed. New York: The Association, 1949 30p. 30 cents.

1724 * *
Johnson, Bascom, comp. Digest of laws and regulations relating to the prevention and control of syphilis and gonorrhea in the forty-eight states and the District of Columbia. New York American Social Hygiene Association, with cooperation of the U.S. Public Health Service, [1940+] 1
Loose-leaf and convenient for rapid reference. Includes new laws regarding pre marital and prenatal examinations.

Directories

1725 * *
U.S. Public Health Service. Bureau of State Services. Division of Venereal Disease. Di rectory of clinics and other facilities for the diagnosis and treatment of venereal diseases. Revised 1952. [Washington: Govt. Print. Off 1953.] 148p. (U.S. Public Health Service. Publication no. 257)
Arranged by state, then city Premarital and prenatal laws and laboratory services for each state, with list of 2,306 clinics.

1726
World Health Organization. International list of venereal-disease treatment centres t ports. Genève: World Health Organization, 1951. 218p.
Fourth list of centers, arranged by country with index to cities. Lists 1–3 issued by Office International d'Hygiène Publique.

SMALLPOX

Histories

1727
Burroughs Wellcome & Co. The history of inoculation and vaccination for the prevention and treatment of disease. London. Burroughs Wellcome, [1913] 119p.
Brief sketch.

1728
Crookshank, Edgar M. History and pathology of vaccination. Philadelphia. Blakiston, 1889 2
Exhaustive history without index. Author's ttitude toward Jenner nd his discovery unfavorably biased.

1729

Great Britain. General Board of Health. Papers relating to the history and practice of vaccination. London: Eyre & Spottiswoode, 1857 188p.

Excellent source book with copies of original documents and elaborate statistics.

1730

Klebs, Arnold C. The historic evolution of variolation. [Baltimore, 1913.] 67p.

Short sketch with useful bibliography Originally published without the bibliography in *John Hopkins Hospital Bulletin* 24 (1913) 69–83.

1731

Moore, James. The history and practice of vaccination. London Callow 1817 300p

Good contemporary account.

1732

—— The history of the small pox. London Longman, Hurst, Rees, Orme, & Brown, 1815. 312p.

History of treatment prior to Jenner discovery

1733

Stearn, Esther A. W and Stearn, Allen E. The effect of smallpox on the destiny of the Amerindian Boston: Humphries, [1945] 153p.

Interesting study from the sixteenth to the twentieth century with bibliography

SOCIAL MEDICINE

Histories

1734

MacNalty Sir Arthur S. The history of state medicine in England, being the Fitzpatrick lectures of the Royal College of Physicians of London for the years 1946 and 1947 London: Royal Institute of Public Health and Hygiene, 1948. 82p.

From 1837 to the establishment of the Ministry of Health in 1919 E olution of preventive medicine in England; Medical Department of the Privy Council, of the Local Government Board; foundations of national health services. With references.

1735

Sand, René. The advance to social medicine. London: Staples Pr [1952] 655p.

Excellent study on the history of various aspects and the advent of social medicine in various countries. With bibliography

1736

Stern, Bernhard J. Medical services by government, local, state, and federal. New York Commonwealth Fund, 1946. 208p. (Studies of the New York Academy of Medicine Committee on Medicine and the Changing Order)

Excellent survey well documented, of these services in the United States.

1737

Warbasse, James P The doctor and the public study of the sociology, economics, ethics, and philosophy of medicine, based on medical history New York: Hoeber 1935. 572p.

The author' aim is to "correlate medical science and the public welfare. to promote knowledge of th social nature of medicine. It presents medicine as a social force and discusses social trends as influences upon the evolution of medicine.

SOCIAL WELFARE

SEE ALSO Economics, medical, Public health, epidemiology hygiene, sanitation; Rehabilitation and occupational therapy; Social medicine.

Bibliographies, indexes, abstracts

The literature of the social sciences is widely scattered therefore it is important that the medical librarian should know where to find material on this subject. Winchell' *Guid* can be consulted for further detailed information, but few works of importance are cited briefly here: *Bibliographie der Sozialwissenschaften Current Sociology* (UNESCO); *London Bibliography of the Social Sciences Public Affairs Information Service Bulletin* and *Social Science Abstracts.*

Two helpful publications not in Winchell are

Sociological Abstracts. New York, 1 1952+ Processed.

Begun on a modest basis, covering 40 periodicals, this journal is expected to expand nd eventually to cover the international field thoroughly The editor is Dr L. P Chall, 218 East 12th Street, New York 3, N Y

U.S. Department of Labor Publications of the Department of Labor Washington, January 1, 1946. 89p.

Lists all publications, including those of the Women' Bureau and Children Bureau, through 1946. The revision of this list, January 1 1948, does not include this information, being supplementary only

SEE ALSO *Japanese Journal J Medical Sciences* (no. 120G); *Medical Social Work.*

Biographies

1738

American Association of Social Workers. Directory of members. New York The Association, 1952. 300p.

Approximately 13,500 names, with a geographic list. Indicates membership in American Association of Medical Social Workers and American Association of Psychi tric Social Workers. A separate index by specialty would be helpful since the American Association of Medical Social Workers' *Di ectory* published in 1937 has not been revised.

Histories

1739

Ferguson, Thomas. The dawn of Scottish social welfare a survey from medie l times to 1863. London Nelson, [1948] 321p.

With illustrations and bibliography

1740

Lallemand, Léon Histoir de la charité. Paris Picard, 1902–12 4 n 5

A history of charitable organizations and institutions through the eighteenth century with particular reference to the sick, and with accounts of legislation

Laws and legislation

1741

Huston, Wendell Social welfare laws of the forty-eight states. 3 ed Seattle Huston, 1937+

Loose leaf. Arranged by state, then by subject. Social Security Act included

1742

Leavy Morton L. Law of adoption simpli fied New York Oceana Publications, [1948] 76p

Covers ll states State welfa nd child placement gencies listed by state

1743

Negligence nd compensation ases notated. The workmen mpensation em ployers liability and current negl gence cases decided in the feder l ourts of the United States, and the English and Canadia courts, with pleadings and forms by the publishers editorial taff Chicago Callaghan, 1912–36. 39v

1743a

——Cum lat common sense index Containing an index according to facts, an index to forms, an index to notes, and table of all cases reported negligenc nd compensation cases annotated. V 1 39 N.C.C.A Comp. by W A. Martin. Chicago Callaghan, 1937 2v

1743b

——New series. Current decisions of courts of last resort relating to the law of automobiles, negligenc generally workmen compensation and insurance. With complete annotations and forms of pleadings and approved instructions by the publishers editorial staff Chicago Callaghan, 1937+ v 1+ Cumulative common-sense index, 1+

Valuable for a study of accident cases and malpractice suits. While primarily useful to lawyers, it concerns the medical aspects of insurance and the legal liability of hospitals and physicians. Although expensive for most medical libraries, the librarian should be able to efer readers to t in public, legal, or university libraries. The common-sense index is cumulated after the issue of each new olume.

see also Johnson (no 1724)

Di ectories

1744 * *

American foundations and their fields; ed. by Wilmer S. Rich and Neva R. Deardorff. 6 [ed.] New York R. Rich Associates, 1948. 284p.

A list with key to geographic distribution. Includes names of donors and trustees and formation regarding purpose. Tables of expenditures and grants, covering the period 1934–40, with analysis by fields of interest. Previous reports were issued in 1930, 1931 and 1934 by the Twentieth Century Fund, and in 1939 and 1942 by the present pub lisher

1745 * *

American Public Welfare Association. The public welfare directory listing of state and local public assistance nd welfare agencies Chicago, 1940+

Arranged by state. Aid for the blind, child welfare, mental hygiene, and ocational re habilitation included. Revised frequently

1746

Harrison, Shelby M., and Andrews, F Emerson. American foundations for social welfare. New York. Russell Sage Foundation, 1946. 249p.

General discussion of foundations in Amer ica. Lists 505 foundations. Bibliography

1747

Public administration organizations; di rectory of unoficial organiz tions in the field of public administration in the U ited States

and Canada. [6. ed.] 1948. Chicago: Public Administration Clearing House, [1948] 215p.

First edition in 1932. Arranged in this order: national, state, regional, Canadian. Full information given, with activities and publications. Also classified list. Includes child health, the deaf and blind, the handicapped, public health, and social welfare. No name index.

1748

Social Work Year Book. New York, 1 1929+

V 1–10 published biennially by the Russell Sage Foundation 11 1951 and 12, 1954, published by the American Association of Social Workers. Pt. 1 signed articles, with excellent bibliographies, on current activities, functions, and programs in social welfare in the United States, with one on International and one on Canadian social work. Pt. 2, directories of agencies functioning in social work or related fields: international governmental, national voluntary and national Canadian includes full information and publications. Lists the periodicals in the bibliographies of Pt. 1

SEE ALSO Cavins (no. 1635) Goodman (no. 1636); Gunn (no. 1637) Hatton (no 1638)

STAMPS MEDICAL

1749

Bishop, William J and Matheson, Norman M. Medicine and science in postage stamps. London: Harvey & Blythe, 1948 82p.

Brief discussion, with illustrations, bibliography and biographic notes.

1750

Newerla, Gerhard J "Medical history in philately *Weekly Philatelic Gossip* 48 (1949) 498–99 554–59 662–63, 684–85 750–51, 812 13 49 (1949) 44–45 162–63, 226–27 287–89 354–55, 364 418, 492–83, 494, 545–46, 551 610–11 672, 736, 802 50 (1950) 11 81 90, 109 172 3, 236–37 250, 756–57 67 786–88 795

Sections on medical mythology and insignia physicians medical scientists other than physicians; persons related to medical progress medical congresses medical schools and institutions medical subjects or scenes stamps issued to combat specific diseases hospitals and sanatoria, nurses Red Cross. Index of countries issuing stamps. With bibliography supplements, addenda, and corrigenda.

STATISTICS

Bibliographies indexes abstracts

A comprehensive bibliography for this subject can be found in Winchell's *Guide* and comparable publications. Selection here has been based either on the indirect application of these tools to the medical sciences or on the fact that they constitute general bibliographic works from which the medical scientist can select material of interest to him.

1751

Population Index. Princeton, N J 1 1935+

Abstracts published by the School of Public Affairs, Princeton University and the Population Association of America. V 1–2 as *Population Literature*. Divided into two main sections, Bibliography and Statistics.

1752 *

U.S. Bureau of the Census. Census publications, statistics of population, agriculture, manufactures Nov 1952. Price list 70, 30. ed. Washington Govt. Print. Off [1952] 27p.

Arranged by subject. Includes material on vital statistics, U S. and foreign, and aid to children. More useful and comprehensive than the processed *List of Reports and Publications Relating to Vital Statistics* issued quarterly since 1937

Histories

1753

Greenwood, Major Medical statistics from Graunt to Farr Cambridge: Univ Pr 1948. 3p. (The Fitzpatrick Lectures, Royal College of Physicians, for 1941 and 1943.)

Brief sketch, devoted chiefly to England the seventeenth to early nineteenth centuries.

Encyclopedias, guides handbooks

1754

Croxton, Frederick E. Elementary statistics with applications in medicine. New York: Prentice-Hall, 1953. 376p.

"No previous study of statistics is assumed, and only very modest knowledge of mathematics is required. A vocabulary of symbols. In addition to tests of significance, includes the use of averages measures of dispersion, curve fitting, correlation. Numerous useful tables in appendixes.

1755

Dublin, Louis I, Lotka, Alfred J and Spiegelman, Mortimer Length of life;

study of the life table. Rev ed. New York Ronald Pr [1949] 379p.

Discusses figures from standpoint of life span, progress made to end of nineteenth century influence of geography heredity occupation and population trends. Effects of sanitation and hygiene bring in the public health point of view

1756 * *

Dublin, Louis I., and Spiegelman, Mortimer The facts of life from birth to death. New York Macmillan, [1951] 461p.

An excellent desk reference book which should be kept close to the telephone. Packed with useful facts, statistics, and bibliographic data. Covers population birth patterns and trends marriage and di orce medical economics and the car of the sick, public health old age and longevity data concerning some of the major diseases, accidents, and mental health.

1757

Fisher Ronald A. Statistical methods for search workers. 11 ed Edinburgh. Oli er & Boyd, 1950. 354p (Biological monographs and manuals, no 5)

Includes practical procedures for biologic research. Supplementing this work are: R. A. Fisher and F Y tes, *Statistical tables for biol gical gricultural and medical re search 4* ed. (New York Hafner 1953) Fisher *Desig f experiment* 6. ed. (Edinburgh. Oliver & Boyd, 1951) and Oskar K. Bu os, ed *Statistical methodology review 1941 1950* (New York Wiley 1951)

1758

Kupper William H ed. Interesting and useful medical statistics Dubuque, Iowa B own, [1948] 528p

Includes accidents, birth and death rates, diseases lif expectancy hospital statistics. Authorities cited Ea y to use, concise alphabetic table of contents Data should not be quoted unles f ll reference is also furnished, because facts *presented w thout due refer* ence to modif i g circumstances indicated in articles f om hich they are taken

1759

League of N tions Health Organization. Statistical handb ok series. Genev [League of Nations 1924 30 no 1 14

I formation oncerning th *compiling of* tal statistic I upea ountries and Canada, indicati g her and how these foreign eport ppea w th bibliography for each countr eport lack full bibliographic informa n St ll he best nd in some cases the only sou *of* formation for some countries

1760

Pearl, Raymond. Introduction to medical biometry and statistics. 3. ed. Philadelphia: Saunders, 1940. 537p.

Includes definitions and historical background and much useful reference material.

1761

United Nations. Statistical Office. Demographic yearbook. New York, N Y [v] 1 1948+

Statistics covering almost every geographic unit of the world. Data on population, births, stillbirths, deaths, marriages, and divorces, and analyses of trends in vital statistics. Prepared in collaboration with the Department of Social Affairs.

1762 *

U S. Bureau of the Census. Statistical abstract of the United States. Washington, v.1 1878+

Previous to 1938 published by other government bureaus. Includes data regarding vocational schools, *mental patients*, vital statistics, health, nutrition, population, and social security Annual revision Inexpensive: medical libraries would do well to buy re sed editions frequently

1763

—— 16 Census, 1940. United States life tables and actuarial tables, 1931 1941 by Thomas Nall Eden Greville prepared under the supervision of Halbert L. Dunn. Washing ton Govt. Print. Off 1946 153p.

Prepared with assistance of insurance ex perts. Based on 16. Census of the United States. With U.S. Bureau of the Census (no. 1764) ery important as basis for work on vital statistics.

1764 *

—— —— Vital statistics rates in the United States 1900–1940, by Forrest E. Linder and Robert D Grove prepared under the super vision of Halbert L. Dunn. Washington. Govt Print. Off., 1943. 1,051p.

Includes mortality natality and population tables. Essential as basis for work on vital statistics.

1765

U S. N tional Bureau of Standards. Tables of the binomial probability distribution. Washington The Bureau, 1949 387p. (Applied Mathematics series, no. 6.)

Useful as basis for the preparation of biologic nd medical statistics.

1766

U S. Public Health Service. National Office of Vital Statistics. State and regional lif tables 1939–41 Prepared in the Statistical

Bureau of the Metropolitan Life Insurance Company Washington: Govt. Print. Off., [1948] 265p.

Life tables for the white population of the United States for each state and for certain groups of states by sex.

1767

——— Summary of International vital statistics, 1937–44. Prepared under the supervision of Halbert L. Dunn. Washington: Govt. Print. Off 1947 299p.

Bibliography includes many recent statistical publications by various governments, listed by country and difficult to locate elsewhere.

1768 * *

Wechsler, David. The range of human capacities. 2. ed. Baltimore: Williams & Wilkins, 1952. 190p.

Includes study of length of life and effect of age. Tables of statistics on measurement of physical and mental ability and of organs, range of body weight and measurements. Has *information difficult to obtain. Bibliography*

1769

World Health Organization. Annual epidemiological and vital statistics. Geneva, 1923+

1923–31 issued by the League of Nations Secretariat, Health Section, with title *Statistics of notifiable diseases* 1932 38 with title ***Annual epidemiological report.*** Beginning 1939–46, issued by the World Health Organization, in two parts: Part I, Vital Statistics and causes of death; Part II, Cases of and deaths from notifiable diseases. These studies present the most up-to-date official information for so large number of countries.

1770

——— Relevé épidémiologique hebdomadaire. Weekly Epidemiological Record. Genève, 1 Année, 1926+

In English and French. Prior to October 1946, issued by League of Nations, Health Section. Contains *notifications and preliminary* statistics relating to diseases designated as pestilential" (quarantinable) Nonquarantinable diseases are also included when prevalence becomes of international importance.

SEE ALSO Dublin (no. 1619)

Directories

1771

American Public Health Association. Vital Statistics Section. Directory of public health statisticians, 5. ed. New York, The Association, 1953. 41p. Processed.

Arranged by state: federal services included.

Dictionaries

1772

U.S. Bureau of the Census. U vocabulario bioestadístico, términos estadísticos, matemáticos, demográficos y médicos, Inglés-español, español-inglés. A vital statistics vocabulary Prepared under the supervision of Halbert L. Dunn. Washington [The Bureau] 1943. 109p. Processed.

Vocabulary of statistical, mathematical, demographic, and medical terms. Convenient aid for field workers, students, and teachers connected with Latin America in the field of public health and vital statistics.

SUPERSTITIONS MAGIC FOLKLORE

Histories

1773

Black, William G. Folk-medicine; a chapter *in the history of culture. London* *Stock,* 1883. 227p. (Publications of the Folk-Lore Society no. 12.)

Useful scientific survey with bibliography

1774

Budge, Ernest A. W. Amulets and superstitions. London Oxford Univ Pr 1930. 543p.

Detailed study of the superstitions of the ancients.

1775

Cutten, George B. Three thousand years of mental healing. New York, Scribner 1911 *318p.*

Includes religious aspects as well as superstitions and hypnotism.

1776

Hovorka, Oskar von, and Kronfeld, Adolf. Vergleichende Volksmedizin; eine Darstellung volksmedizinischer Sitten und Gebräuche, Anschauungen und Heilfaktoren, des Aberglaubens und der Zaubermedizin. Stuttgart: Strecker & Schröder 1908–09 2v

Exhaustive work, illustrated, with bibliography V 1 contains, in alphabetical order descriptions and histories of the use in *folk* medicine of such diverse things as plants, chemical substances, animals, magic words, parts of the body etc. V 2 is devoted to diseases of different parts of the body surgery dentistry etc.

1777
Mackay Charles. Extraordinary popular delusions and the madness of crowds. Boston Page, 1932. 724p.
Earlier edition has title: *Memoirs of extraordinary popular delusions.* Useful work with chapters on the alchemists, the magnetisers, the crusades, the witch mania, etc

1778
Reichborn-Kjennerud, Ingjald. Vår gamle trolldomsmedisin. Oslo: Dybwad, 1927–47 5v in 3 (Skrifter utgitt av det Norske Videnskaps-Akademi i Oslo. Historisk-filosofisk Klasse.)
Detailed history of Scandinavian folk medicine, with bibliography

1779
Singer Charles J From magic to science. London Benn, 1928 253p.
Essays on science under the Roman Empire the Dark Ages and the dawn of science the Lorica of Gildas early English magic and medicine early herbals the vision of Hildegard of Bingen the School of Salerno and its legends.

1780
Summers, Montague. A popular history of witchcraft. 2. ed London K. Paul, Trench, Trubner 1937 276p.
A readable study of witchcraft, past and present

1781
Thompson, Charles J S. The hand of destiny: the folk-lore and superstitions of everyday life London Rider [1932] 303p
Popular story arranged by subject.

1782
—— Magic and healing London Rider [1946] 176p.
Illustrated, readable. No bibliography or index. Covers early periods and British Isles through eighteenth century Includes such subjects as healing by incantation healing and astrology by sympathy by touch herb lore precious stones, etc.

1783
—— The mysteries and secrets of magic Philadelphia Lippincott, 1928 320p
Popular history

SURGERY

SEE ALSO Anesthesia Military medicine and surgery Orthopedic Psychiatry and neurology

Bibliographies indexes abstracts

1784
Abstracts of World Surgery London, v 1 11 1947–52. Continued in *Abstracts of World Medicine* (no. 82) same type of abstracts and arrangement.

1785
Haller Albrecht von. Bibliotheca chirurgica. Berne: Haller 1774–75 2v

1786 * *
International Abstracts of Surgery Chicago, 16, 1913+
Supplement to *Surgery Gynecology and Obstetrics* v 16 1913+ One of the most important sources for surgical literature. Includes gynecological survey V 16 is the first volume issued, since this publication assumed the numbering of the journal it supplements.

1787
International Surgical Digest Hagerstown, Md., 1 1926+
Abstracts are much longer than usual. Not comprehensive and little foreign literature covered. Chiefly of value to the practitioner

1788
Jahresbericht Chirurgie. Berlin, 1–43, 1895–1937
V 1 25 as *Jahresbericht über die Fortschritte auf dem Gebiete der Chirurgie* v 26–32 as *Jahresbericht über die gesamte Chirurgie und ihr Grenzgebiete* An abstract and review journal through v 33 (1927) After that it becomes classified bibliography embodying the references abstracted in *Zentralorgan* (no. 1793) Good for foreign literature.

1789
Orr H. Winnett. A list of books and pamphlets on the history of surgery and orthopedic surgery: the collection of. Lincoln, Nebr [Privately printed], 1943. 182p
Useful, illustrated checklist.

1790
Pazzini, Adalberto. Bio-bibliografia di storia della chirurgia. Roma Edizioni Cosmopolita [1948] 524p
In two parts, biography and bibliography The first part gives brief biographies and lists editions of works. The second part describes some of the works in more detail. Covers early periods through Harvey Cushing.

1791
Valle, Rafael H. La cirugía mexicana del siglo XIX México, D.F. Tipográfica Sag, [1942] 349p

Bibliography of Mexican surgeons. List of surgeons with short biographic notes; some portraits. Directory of surgeons. List of hospitals and scientific societies.

1792

Zeis, Eduard. Die Literatur und Geschichte der plastischen Chirurgie. Leipzig: Engelmann, 1863. 299p. Nachträge. 1864. 52p.

Bibliography arranged by subject, with notes; and section on the history of plastic surgery and its literature.

1793

Zentralorgan für die gesamte Chirurgie und ihre Grenzgebiete. Berlin, 1 1913+

Published by the Deutsche Gesellschaft für Chirurgie. V 1–6 as *Zentralblatt fur die gesamte Chirurgie und ihre Grenzgebiete* Very comprehensive abstract journal. Especially good for foreign literature. Its references were also published separately 1927–37 as a classified bibliography (no. 1788) Suspended 1944–47

SEE ALSO *Excerpta medica* (no 90) Section IX; *Japanese Journal of Medical Sciences* (no. 120 I) *Sovetskoe meditsinskoe* (no. 130E); *Tsentral'nyi* (no. 131) Serbia V *Year Book of General Surgery* (no. 143E)

SEE ALSO abstract, review or bibliographic sections of *British Journal of Plastic Surgery Chirurgia italiana Journal de chirurgie Journal of Oral Surgery Oral Surgery Oral Medicine and Oral Pathology Plastic and Reconstructive Surgery Zentralblatt für Chirurgie*

Reviews

1794

Advances in Surgery New York, 1 2, 1949

Comprehensive reviews with extensive bibliographies.

1795

Ergebnisse der Chirurgie und Orthopädie Berlin, .1 1910+

Good review journal. With excellent bibliographies. Suspended 1944–45.

1796

Wiederherstellungschirurgie und Traumatologie. Reconstruction Surgery and Traumatology Chirurgie Réparatrice et Traumatologie. Basel, .1 1953+

An annual survey of reconstructive surgery of the locomotor system. Articles in French, English, and German.

Biographies

1797

Alcántara Herrera, José. "Compendio de cronología quirúrgica mexicana. *Cirugía y cirujanos 18* (1950) 533–79 *19* (1951) 1–49 55–104, 109–54 163–91.

Biographic study in chronologic sequence of Mexican surgeons from the earliest times. Many bibliographic citations. Occasional portraits.

1798

American College of Surgeons Yearbook. Chicago, 1, 1913+

Geographic and alphabetic lists of fellows with address and professional information. Includes contemporary Latin-American surgeons. Cumulative necrology 1913+ Current volumes revised triennially

1799

[Biographies of English surgeons.] *British Journal of Surgery* .1–10, 1913–23.

V 1–8 contain interesting biographies, usually with portraits. Beginning 9 they were superseded by series of historical essays edited by Sir D'Arcy Power Since his death in 1941 only the usual "memorials" are published but with good portraits.

1800

Deutsches Chirurgen-Verzeichnis. Hrsg von A. Borchard, W v Brunn bearb. von Friedrich Michelsson. 3 Aufl. Leipzig: Barth, 1938. 898p.

Biographic dictionary of contemporary German surgeons. Contains separate list of members of the Deutsche Gesellschaft fur Chirurgie abroad and certain foreign surgeons. 1 ed 1920, and 2. ed., 1926, issued as *Deutscher Chirurgen-Kalender*

1801

Killian, Hans, and Krämer G. Meister der Chirurgie und die Chirurgenschulen im deutschen Raum Deutschland, Österreich, deutsche Schweiz. Stuttgart: Thieme, 1951 231p.

A brief historical introduction, followed by chapters, arranged by locality on the history of the medical schools and biographies. With bibliography

1802

Leonardo, Richard A. Lives of master surgeons. New York Froben Pr 1948. 469p and Suppl. no. 1, 1949 p.471 518.

Short biographies of famous surgeons from the earliest times, alphabetically arranged. Companion volume to the author *History of surgery* (no. 1818)

1803

"Master surgeons of America, *Surgery Gynecology and Obstetrics* 35–71 1922–40.

Excellent series of biographies with good portraits. Usually one in each issue of the

journal. Since 1940, memoirs, portraits, and articles of historical interest can often be found in the "Surgeon library section.

1804

Plarr Victor G Lives of the fellows of the Royal College of Surgeons of England. Rev by Sir D'Arcy Power W G Spencer and G E. Gask. Bristol Wright, 1930. 2

Limited to biographies of deceased fellows. Gives personal as well as professional data, and principal writings. Some sketches very short; those of important persons quite extensive. Includes honorary fellows and distinguished foreigners on whom fellowships were bestowed. Continued by no. 1805

1805

Power Sir D'Arcy and LeFanu, William R. Lives of the fellows, 1930–1951 by the late Sir D'Arcy Power (1930–40) and W R. LeFanu (1940–51) London The College, 1953. 899p. Continuation of no 1804

1806

Société I ternationale de Chirurgie Index des titres et publications des membres Bruxelles The Société, 1933–34 2v

Arranged by country Date of birth, professional data, and list of writings included. Useful for contemporary surgeons. English title of the Société International Surgical Association.

1so American Medical Association (no. 278) *Di ectory f medical specialists* (no 281)

Histories

1807

American Journal of Surgery n.s., 51 no 1 (Jan., 1941) Fiftieth anniversary (of the journal) New York, 1941 306p.

Contains 23 articles by different authors on different aspects of surgery during the 50 years of the journal existence. Some well documented

1808

Bankoff George The story of plastic surgery London Faber & Faber (1952) 224p

For the la man Plastic surgery today and its history

1809

——The tory of su gery London Barker (1947) 248p

Popular sketch from prim t man on.

1810

Billings, John S "The hi tory nd liter tur of surgery I Dennis, F ederic S., ed *System f surgery* Philadelphia 1895 1 p.17 144.

Very useful ketch

1811

Bottero, Aldo. La chirurgia del polmone attraverso i tempi. Milano: Hoepli, 1945 197p.

Illustrated, well-documented study from prehistoric days.

1812

Brunn, Walter A. F von. Kurze Geschichte der Chirurgie. Berlin: Springer 1928. 339p.

Short, illustrated history with bibliography

1813

Cope, V Zachary Pioneers in acute abdominal surgery London: Oxford Univ Pr 1939 134p.

Short history with bibliography and chronologic list of landmarks in the history of the subject.

1814

Flack, Isaac H. Surgeons all; by Harvey Graham [*pseud*] London: Rich & Cowan, (1939) 426p.

Popular history with bibliography American edition has title: *The story of surgery*

1815

Fourmestraux, Jacques de. Histoire de la chirurgie française (1790–1920) Paris Masson, 1934 232p.

General survey N subject index.

1816

Gurlt, Ernst J Geschichte der Chirurgie und ihrer Ausübung. Berlin. Hirschwald, 1898. 3v

Exhaustive history through the early sixteenth century Contains biographies, bibliographies of authors cited, discussions of their work, and often extracts from their writings. Glossary of terms.

1817

Harvey Samuel C The history of hemostasis. New York Hoeber 1929 128p.

Brief sketch.

1818

Leonardo, Richard A. History of surgery New York. Froben Pr 1943. 504p.

Chronologic survey well illustrated. Useful, though not definitive text. Lengthy bibliography

1819

Maltz, Maxwell. Evolution of plastic surgery New York Froben Pr 1946. 368p.

Chronologic story with chapters on: anesthesia and reparative surgery; free skin grafts World War I Illustrated, with chronology

1820

Pa ker George. The early history of surgery Great Britain. London: Black, 1920. 204p. Brief sketch, with bibliography

1821

Power Sir D'Arcy, ed. A mirror for surgeons; selected readings in surgery Boston. Little, Brown, 1939. 230p.

Translated extracts, with historical notes, from outstanding contributions to surgery from Arderne to J Marion Sims.

1822

Power Sir D'Arcy A short history of surgery London: J Bale, Sons & Danielsson, 1933. 91p. (Short history series.)

1823

Quesnay François. Recherches critiques et historiques sur l'origine sur les progrès de la chirurgie en France. Paris Osmont, 1744. 635p.

Excellent survey Contains "Index funereus chirurgorum Parisiensium ab anno 1315 ad annum 1729

1824

Sudhoff, Karl. "Beiträge zur Geschichte der Chirurgie im Mittelalter *Studien zur Geschichte der Medizin 10–12* (1914–18)

Exhaustive history of surgery in the Middle Ages, with illustrations.

1825

Thompson, Charles J S. *The history and evolution of surgical instruments.* New York. Schuman, 1942. 113p.

A brief, well-illustrated history The instruments depicted are culled from early works, with references cited, or photographed from the collection of the Royal College of Surgeons of England, now unfortunately destroyed. A portion of the material appeared serially in the *British Journal of Surgery*

1826

Wall, R. Cecil B. The history of the Surgeons' Company 1745–1800. London. Hutchinson's Scientific and Technical Pub. Co [1937] 235p.

Useful work, with bibliography "This history brings to light for the first time the whole story of the formative period of the profession of surgery

1827

Young, Sidney The annals of the barber surgeons of London. London Blades, East & Blades, 1890. 623p.

A documentary history with biographies. Useful, but expensive.

Encyclopedias guides, handbooks

1828

Banks, Sam W and Laufman, Harold An atlas of surgical exposures of the extremities. Philadelphia: Saunders, 1953 391p.

Contains 552 careful drawings done from photographs of actual dissections. Brief explanatory text.

1829

British surgical practice, ed. by Ernest Rock Carling and J Paterson Ross. London. Butterworth, 1947–51. 8v and index.

Extensive system. Encyclopedic arrangement. Good illustrations and bibliographies. Continued by annual volumes, *Surgical Progress* 1951+ These contain original articles, critical surveys, and abstracts. References to original volumes maintained by Butterworth key numbering system.

1830 * *

Cutler Elliott C., and Zollinger Robert M. Atlas of surgical operations. 2. ed. New York: Macmillan, 1949 225p.

Step-by-step operative procedures in 84 plates with explanatory text. It includes also anesthesia, pre- and post-operative care.

1831

Finochietto, Enrique, and Finochietto, Ricardo. Técnica quirúrgica: operaciónes y aparatos. Buenos Aires: EDIAR, 1944+ 17v (?)

A magnificently illustrated treatise on operative surgery detailed and comprehensive. At least 17 olumes contemplated.

1832

Graham, E arts A., ed. Surgical diagnosis, by American authors. Philadelphia Saunders, 1930. 3v and index.

A ery comprehensive work of importance to both surgeons and clinicians. Not revised but nothing else has superseded it.

1833 * *

Gross, Robert E. The surgery of infancy and childhood, its principles and techniques. Philadelphia. Saunders, 1953. 1,000p.

Contains 1 488 clear illustrations. Based on thousands of operations performed at the Boston Children' Hospital.

1834

Kirschner, Martin. Allgemeine und spezielle *chirurgische Operationslehre.* 2. Aufl., hrsg. von N. Guleke und R. Zenker Berlin: Springer *1950+ 10v in 11.*

Each volume can be purchased separately Detailed procedures with many excellent illustrations. Volumes cover different subjects written by eminent specialists. Bibliographies. V 2 and 7 pt. 1 available. Others in preparation. A 1. ed. of Kirschner and Nordmann, *Die Chirurgie* 1925–30, 6v in 9 pt., was begun in 1939 and never completed. It is understood that this 2. ed. of *Allgemeine* takes the place of this work.

1835 * *

Lewis, Dean DeWitt, *et al* eds. Practice of surgery Hagerstown, Md.. Prior 1927+ 12v and index.

Comprehensive loose-leaf system. No author index. Practical and well illustrated. Revision pages should be dated as they are received. Superseded articles may be found at the Library of the New York Academy of Medicine.

1836 *

Maingot, Rodney ed. The management of abdominal operations. London Lewis, 1953. 1,253p.

Recent and accepted advances reviewed by recognized specialists. Well illustrated.

1837 *

—— Techniques in British surgery Philadelphia. Saunders, 1950. 733p.

Detailed accounts of 70 operations with 1,000 illustrations. Includes pr and post oper n care and management of complications. Arranged by regions of the body T some extent revises his three volume *Postgraduate surgery* 1935–37

1838

Nelson new loose leaf surgery prepared under the direction of an advisory board comprising the world' leading surgeons ed-in-chief, Allen O Whipple associate ed., Fordyce B. St. John. New York and Edinburgh Nelson, [1920–49] 8 and index olume.

Earlier title *Nelson loose-leaf living surgery* The surgical equivalent of *Nelson new loose-leaf medicine* (no. 515) Good illustrations Arrangement topographic. Includes urology and gynecology For Nelson otology see Kopetzky (no. 1346) Superseded articles may be found t the Library of the New York Academy of Medicine. Kept up to date, 1950–52, by *Monographs on Surgery* None issued in 1953 and continuation uncertain.

1839

Oxford loose leaf surgery by various authors; ed. by Frederic Francis Burghard and Allen B Kanavel. New York. Oxford Univ Pr 1918+ 5v in 13

Replacement and additional pages dated. Includes specialties, g., urology gynecology

1840

Paolucci di V lmaggiore, Raffaele, ed. Tecniche chirurgiche. 2. ed. Bologna Cappelli, 1941+ V 1+

A comprehensive treatise of operati surgery profusely illustrated 1 ed in 4 1938–48. V 4 of 2. ed not yet published, but 1 ed. till available.

1841

Slocum, Donald B. An tlas of amputations. St. Louis: Mosby 1949 562p.

Has more text than the average atlas 564 illustrations from drawings and photography Appliances for prosthesis included.

SEE ALSO Ackerman (no. 1361 1); Maisonnet (no. 663); Schafer (no. 1367)

For surgery of the nervous system, SEE Psychiatry and neurology

SURGERY MILITARY

SEE Military medicine and surgery

SYMBOLISM MEDICAL

Histories

1842

Potter Edwin S. Serpents in symbolism, art and medicine. Santa Barbara, Calif.: Privately printed, 1937 85p.

Short account.

1843

Sozinskey Thomas S. Medical symbolism Philadelphia Davis, 1891. 171p. (Physicians and students' ready reference series, no. 9)

Chapters on the serpentine god of medicine, Aesculapian staff and serpent, medical amulets, the pentacle, etc.

Encyclopedias guides handbooks

1844

Bergman, Emanuel. Medicinska emblem och symboler [Karlshamn, Sweden] Sveriges Läkarförbunds Förlagsaktiebolag, [1941] 104p.

Discussion of medical emblems nd symbols illustrations and brief bibliography

SYPHILIS

SEE Skin and venereal diseases.

TECHNIQUE

SEE ALSO Anatomy histology embryology· Bacteriology mycology parasitology viruses Biology Chemistry and biochemistry; Diagnosis Laboratories Pathology

Bibliographies, indexes abstracts

1845

A B T; Abstracts of Bioanalytic Technology Chicago, 1 1951+

Published by the Council of American Bioanalysts. Abstracts of limited selection of articles in fields of bacteriology chemistry hematology mycology parasitology serology and virology Quarterly

SEE ALSO abstract, review or bibliographic sections of *Review / Scientific Instruments Stain Technology*

Reviews

1846 *

Methods in Medical Research. Chicago, 1 1948+

Timely reviews of technical methods.

Histories

1847

Conn, Harold J The history of staining; with contributions from Lloyd Arnold, A. F Blakeslee, R. S. Cunningham, [*et al*] Geneva, N.Y., Biological Stain Commission, 1933. 141p.

Chapters on men who have made contributions, and on dyes and staining methods in bacteriology histology, and vital staining With useful bibliographies.

Encyclopedias guides, handbooks

1848 * *

Conn, Harold J Biological stains; handbook on the nature and uses of the dyes employed in the biological laboratory 6. ed Geneva, N.Y Biotech Publications, 1953. 367p.

Published under the auspices of the Biological Stain Commission. Revised with assistance of Elmer H. Stotz and Mary A. Darrow Extensive bibliography and helpful tables. No procedures included for those, see Conn and Darrow (no. 1849)

1849 *

Conn, Harold J and Darrow Mary A., comps. Staining procedures used by the Biological Stain Commission. Geneva, N.Y.: Biotech Publications, 1946+ 1

Published as numbered leaflets in loose leaf form, frequently revised A companion volume to Conn (no. 1848)

1850

Cowdry Edmund V Laboratory technique in biology and medicine. 3. ed Baltimore: Williams & Wilkins, 1952. 382p

Arranged by subject. Handy reference work for physician and investigator Information on the function and morphology of structures stained. Particularly useful for new techniques.

1851

Gurr Edward. A practical manual of medical and biological staining techniques London Hill, 1953. 320p.

Presents complete procedures for little-known, as well as standard, staining methods.

1852 * *

Lee, Arthur B. The microtomist' vade mecum handbook of the methods of animal and plant microscopic anatomy 11. ed Ed. by J Brontë Gatenby and H. W Beams [*et al*] London. Churchill, 1950. Philadelphia Blakiston, 1950. 754p.

A very useful reference book for investigators in the biologic sciences. Arranged conveniently

1853 * *

McClung, Clarence E., and Jones, Ruth M eds. Handbook of microscopical technique for workers in animal and plant tissues. 3. ed. New York. Hoeber, 1950. 790p.

The same type of book as Lee (no 1852) but has some methods not included i that work. Important for investigators in the biologic and medical sciences.

1854

Péterfi, Tibor ed. Methodik der wissenschaftlichen Biologie, unter Mitarbeit von O. Arnbeck [*et al.*] Berlin Springer 1928. 2v

One of the most comprehensive handbooks for biologic methods, of somewhat the same type as McClung (no. 1853) and Lee (no 1852) but much more extensive. Especially fine for stains, giving details of preparations and references to the literature. Still in print.

SEE also Abderhalden (no. 779)

THERAPEUTICS

SEE ALSO Antibiotics; Pharmacology and pharmacy

Bibliographies indexes abstracts

1855

Linde Air Products Company Bibliography on oxygen therapy Rev ed. New York. The Company [1947] 99p. Suppl. no. 1 [1953.] 91p.

Lists nearly 10,500 articles by author with subject classification indicated.

SEE ALSO *Excerpta medica* (no. 90) Section VI; *Società medica* (no. 130G); *Year Book / Drug Therapy* (no. 143B); *Year Book / General Therapeutics* (no. 143F)

SEE ALSO abstract, review or bibliographic sections of *American Practitioner and Digest / Treatment.*

1878
Mense, Carl Anton, *et al.*, eds. Handbuch der Tropenkrankheiten. 3. Aufl. Leipzig: Barth, 1924–30. 6v. in 7.
A comprehensive work. V. 6 dealing with *tropical diseases of animals exists only in the 2. ed.* Lengthy bibliographies.

1879 * *
Simons, Robert D. G. Ph., ed. Handbook of tropical dermatology and medical mycology. Amsterdam: Elsevier Pub. Co. 1952–53. 2v.
Over 80 international contributors. Comprehensive coverage with extensive bibliographies. 1,000 illustrations.

TUBERCULOSIS

Bibliographies, indexes, abstracts

1880
Tuberculosis Index and Abstracts of Current Literature. London, 1, 1946+
Published quarterly by the National Association for the Prevention of Tuberculosis. V. 1, no. 1: Tuberculosis Index and Digest of Current Literature. Classed, selective, annotated bibliography and abstracts. Lists new chemo- and antibiotic therapeutic agents. No author or subject index.

1881
U.S. Veterans Administration. Medical and General Reference Library. Tuberculosis and mental illness: selected bibliography 1803–1952. Washington: The Library, 1953. 27p.
Contains 380 references in chronologic arrangement.

1882
Zentralblatt für die gesamte Tuberkuloseforschung. Berlin, 1, 1906+
V. 1–14 as *Internationales Zentralblatt für die gesamte Tuberkulose-Forschung*. Published by the Deutsche Tuberkulose-Gesellschaft. Comprehensive résumé of literature and abstracts. Good for foreign literature. During 1921–38 references were also published as classified bibliography *Jahresbericht Tuberkuloseforschung*. Suspended 1945–49.

SEE ALSO *Excerpta medica* (no. 90) Section XV; *Traité de médecine* (no. 519) III and VI.

SEE ALSO abstract, review or bibliographic sections of *American Review of Tuberculosis*; *Revue de la tuberculose*; *Tuberkulosearzt*; *Zeitschrift für Tuberkulose*.

Reviews

1883
Ergebnisse der gesamten Tuberkuloseforschung. Leipzig, v.1, 1930+
Good review journal with excellent bibliographies. Suspended 1942–52.

1884
Fortschritte der Tuberkuloseforschung. Advances in Tuberculosis Research. Progrès de l'exploration de la tuberculose. v.1, 1948+ In *Bibliotheca tuberculosea*. Basel, 1948+ Fasc. 1+
Critical review articles in German, French, or English with long selective bibliographies.

Biographies

1885 *
American College of Chest Physicians. Membership roster. [8 ed.] Chicago: [The College] 1952. 599p.
Contains 4,016 names arranged geographically under 69 countries, with professional information. Revised every few years.

1886
American Trudeau Society. Medical Section of the National Tuberculosis Association. Membership roster 1951. New York: [National Tuberculosis Association, 1952] 431p.
Geographic and alphabetic lists, with professional information. Foreign membership is large. Also contains a necrology. Issued every few years.

1887
Cummins, S. Lyle. Tuberculosis in history from the 17th century to our own times. Baltimore: Williams & Wilkins, 1949. 205p.
Biographies of the British school; early continental phthisiologists; Trudeau and Koch.

Histories

1888
Bankoff, George. The conquest of tuberculosis. London: Macdonald, [1946] 187p.
Popular sketch.

1889
Brown, Lawrason. The story of clinical pulmonary tuberculosis. Baltimore: Williams & Wilkins, 1941. 411p.
Brief historical résumé. Readable story with bibliography.

1890
Dubos, René, and Dubos, Jean. The white plague; tuberculosis, man and society. Boston: Little, Brown, [1952] 277p.

Popular story including discussion of famous people who had tuberculosis.

1891

Flick, Lawrence F. Development of our knowledge of tuberculosis. Philadelphia [Wickersham Print. Co.] 1925 783p.

Exhaustive history from the earliest times

1892

Meachen, George N. A short history of tuberculosis. London, J. Bale, Sons & Danielsson 1936. 105p. (Short history series.)

1893

Myers, Jay A. Invited and conquered: historical sketch of tuberculosis in Minnesota. [St. Paul: Minnesota Public Health Association, 1949] 738p.

Detailed story. With biographic sketches.

1894

Webb, Gerald B. Tuberculosis. New York: Hoeber 1936. 205p. (Clio medica, no. 16.)

With bibliography

Encyclopedias, guides, handbooks

1895

Dublin, Louis I. A 40 year campaign against tuberculosis. New York, Metropolitan Life Insurance Co., 1952. 115p.

Interesting survey with statistical tables, charts, and maps.

1896 *

Goldberg, Benjamin, ed. Clinical tuberculosis. 5. ed. Philadelphia: Davis, 1947. 2v

All aspects.

1897

National Tuberculosis Association. Laws, rules, regulations relating to tuberculosis arranged by topic. Comp. by Mary Graham Mack. New York: The Association, [1950] 12v

Arranged by state. Includes the 48 states, District of Columbia, Alaska, Hawaii, and New York City. V. 11-12 form supplements compiled by Mary Graham Mack and George E. Halstrand.

1898

Pagel, Walter, Simmonds, Francis A. H., and MacDonald, Norman. Pulmonary tuberculosis: pathology, diagnosis, management, and prevention. 3. ed. London: Oxford Univ. Pr. 1953. 728p.

Previous editions, 1939 and 1945, by George G. Kayne, Walter Pagel, and Laurence O'Shaughnessy. The 3. ed. is largely rewritten with much new material, especially on chemotherapy and surgery. Contains 302 illustrations.

1899 *

Rich, Arnold R. The pathogenesis of tuberculosis. 2. ed. Springfield, Ill., Thomas, [1951] 1,028p.

Exhaustive treatise with good bibliography

1900

Sellors, T. Holmes, and Livingstone, James L., eds. Modern practice in tuberculosis. London: Butterworth, 1952. 2v

Recent advances in pathology, radiology, therapy, surgery as well as in the social and economic aspects of tuberculosis. Written by 39 specialists in the field. Well illustrated. Good bibliographies.

1901

Youmans, Guy P., Doub, Leonard, and Youmans, Anne S. The bacteriostatic activity of 3500 organic compounds for *Mycobacterium tuberculosis var. hominis*. Washington: National Research Council, 1953. 713p. (National Research Council. Chemical-Biological Coordination Center. Review no. 4.)

Presents the techniques used together with the tabulated results. Even though of primarily negative value, the authors believe that the data should be disseminated in order to prevent unnecessary duplication of effort in other laboratories working on the same problem. Has a "Formula index of table compounds."

Directories

1902

National Association for the Prevention of Tuberculosis. Handbook of tuberculosis activities in Great Britain and the Commonwealth. Ed. by Harley Williams [*et al.*] 14. ed. London: The Association, 1952. 425p.

A complete directory of hospitals, sanatoria and clinics, hospital boards, local health authorities, and tuberculosis services.

1903

National Tuberculosis Association. Tuberculosis hospital and sanatorium directory. New York, 1945+

Arranged by state. Continues Association's *Directory of sanatoria, hospitals, and day camps for the treatment of tuberculosis in the United States.*

TYPHUS

see Public health, epidemiology, hygiene, sanitation.

ULTRASONICS

Bibliographies indexes, abstracts

1904

Curry Beth, and Hsl, Eugene. Bibliography supersonic or ultrasonic, 1926 to 1949 Stillwater Okla. Research Foundation, Oklahoma Agricultural and Mechanical College, 1949 75+77p. Processed.

Selections from a limited number of sources arranged in both classified and author lists. Many references to medical applications.

1905

Dénier André. Les ultra-sons appliqués à la médecine. 2. éd. [Paris]: L'Expansion Scientifique Française, [1952] 216p.

Particularly useful for its bibliography of 1 133 items.

1906

Nammark, George M., Klair Jane, and Mosher William A. A bibliography on sonic and ultrasonic vibration biological, biochemical and biophysical applications, *Journal of the Franklin Institute 251* (February 1951) 279–99; (March, 1951) 402–08.

Contains 580 references in chronologic arrangement.

1907

Ultraschall in Medizin und Grenzgebieten. Zurich, 1 1949+

Good bibliography of current literature in each issue. Title also in English, *Ultrasonics* and French, *Le Ultrasons* V 1–4 complete in single issue each beginning v 5 issued quarterly

1908

Ultrasuoni medicina Roma, 1+ 1951+

Contains section, "Rassegna bibliografica, and occasional long bibliographies.

Encyclopedias guides, handbooks

1909

Pohlman, Reimar ed. Die Ultraschalltherapie: praktische Anwendung des Ultraschalls in der Medizin Bern Huber [1951] 392p.

An illustrated survey by seven contributors. Bibliography of 580 references.

UROLOGY

Bibliographies, indexes abstracts

1910

Centralblatt für die Krankheiten der Harn- und Sexual-Organe. Leipzig, 1 17 1889–1906.

V 1–4 1889–93, as *Internationale Centralblatt für die Physiologie und Pathologie der Harn- und Sexual-Organe* Abstract journal, with book reviews. United with *Monatsberichte für Urologie* to form *Zeitschrift für Urologie*

1911

Jahresbericht Urologie. Berlin, v.1–11 1921–31.

Continues no 1912. V 1–6 as *Jahresbericht über die gesamte Urologie und ihre Grenzgebiete* A comprehensive classified bibliography Good for foreign literature. Issued as a supplement to *Zeitschrift für urol gische Chirurgie* indexing chiefly the titles abstracted by this journal.

1911.1 *

Urological Survey Baltimore, v 1 1951+

Bimonthly abstract journal. Author index.

1912

Urologischer Jahresbericht. Berlin, 1905–13.

1905–09 as *Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Erkrankungen des Urogenitalapparates.* Continued as no. 1911.

SEE ALSO *Excerpta medica* (no. 90), Sections VI and IX *Japanese Journal of Medical Science* (no. 1200M); *Sovetskoe meditsinskoe* (no. 130); *Traité de médecine* (no. 519) v.XIV; *Tsentral'nyĭ* (no. 131) Serila V *Year Book of Urology* (no. 143Q)

SEE ALSO abstract, review or bibliographic sections of *British Journal of Urology Cirugía ginecol gía y urología Revista española de cirugía y urología Urologia; Urologic and Cutaneous Review Zeitschrift für Urologie Zeitschrift für urologische Chirurgie und Gynäkologie.*

Histories

1913

American Urological Association. History of urology Baltimore: Williams & Wilkins, 1933. 2

A collection of historical papers on various aspects of urology No index. Useful particularly for America and for modern history Some bibliographic references.

1914

Burroughs Wellcome & Co. The evolution of urine analysis. London: Burroughs Wellcome, [1911] 92p.

Brief sketch.

1915

Desnos, Ernest. Histoire de l'urologie. Paris Doin, 1914. 294p.

Excellent, well-illustrated history with bibliography; no index. Reprinted from *Encyclopédie française d'urologie.*

Encyclopedias guides handbooks

1916 * *

Allen, Arthur C. The kidney medical and surgical diseases. New York: Grune & Stratton, 1951. 583p.
Excellent plates and good bibliographies.

1917

Dabach, William P. A collection of urogenital drawings. Anatomy Anomalies. Gross pathology 1915–1952. New York: American Cystoscope Makers, [1952] 222p.
Has 243 figures from material in outstanding urologic clinics, some published previously others not. All represent pathologic changes.

1918 * *

Herbut, Peter A. Urological pathology Philadelphia: Lea & Febiger 1952. 2v
Comprehensive work with extensive bibliographies and 527 illustrations.

1919

Lichtenberg, Alexander von, Voelcker Friedrich, and Wildbolz, Hans. Handbuch der Urologie. Berlin: Springer 1926–29 5v
Comprehensive work. Includes pathology of the male reproductive organs. Still in print.

1920 *

Lowsley Oswald S and Kirwin, Thomas J Clinical urology 3. ed. Baltimore: Williams & Wilkins, 1953. 2v
A practical survey of diseases and anomalies in male and female, including operative technique and an exposition of the urogenital tract. Bibliographies.

1921

Roen, Philip R. Atlas of genito-urinary surgery New York: Appleton-Century-Crofts, [1951] 325p.
Concise text with simple fine drawings of 71 standard operative procedures. Arranged by organ.

1922 *

Rolnick, Harry C. The practice of urology Philadelphia Lippincott, [1949] 2v
Summarizes recent advances, including those based on World War II experience; 1,350 illustrations.

1923

Smith, Homer W. The kidney structure and function in health and disease. New York Oxford Univ Pr 1951 1,049p.
Good reference work. Bibliography With Allen (no. 1916) covers the subject completely

VACCINATION

see Smallpox.

VENEREAL DISEASES

see Skin and venereal diseases.

VETERANS

Bibliographies, indexes abstracts

1924

U.S. Veterans Administration. Medical and General Reference Library Medical care of veterans in the United States 1945–1950. Washington. Veterans Administration, 1951. 21 leaves. Processed.
Bibliography without annotations. Chronologic arrangement.

VETERINARY MEDICINE

see also Bacteriology mycology parasitology viruses; Botany and agriculture; Zoology

Bibliographies indexes, abstracts

1925

Encyclopédie vétérinaire périodique; revue encyclopédique des sciences vétérinaires. Lyon, 1, 1944+
Abstracts, arranged by subject, stressing the European literature. Monthly

1926

Index veterinarius. Weybridge, Eng., v.1, 1933+
Published by Great Britain, Imperial Bureau of Animal Health, beginning 14, 1946, by Commonwealth Bureau of Animal Health. A bibliography forming "a complete index to publications relating to veterinary research, administration, public health, and education. Early volumes mimeographed.

1927

Jahresbericht Veterinär-Medizin. Berlin, 1–71, 1881–1943/44.
1881 1917 as *Jahresbericht über die Leistungen auf dem Gebiete der Veterinär Medizin* 1918–27 as *Ellenberger-Schütz Jahresbericht.* Comprehensive abstract journal. Fine for foreign literature. Forms the abstract section of the *Archiv für wissenschaftliche und praktische Tierheilkunde.*

1928
Tropical Veterinary Bulletin. London, v.1–18, 1912–30.
Abstract journal issued by Great Britain, Bureau of Hygiene and Tropical Diseases, originally called the Tropical Diseases Bureau. Superseded by no. 1929

1929
Veterinary Bulletin. Weybridge, Eng., v 1 1931+
Supersedes no. 1928. An abstract journal issued by Great Britain, Imperial Bureau of Animal Health through 1947 after that, by the Commonwealth Bureau of Animal Health. Classified arrangement. Book reviews.

SEE ALSO *Agricultural Index* (no. 792) *Biological Abstracts* (no. 768e and f); *Experiment Station Record* (no. 798) Harrall and Dom (no. 1957) *Nutrition Abstract* (no. 1020) *Review of Applied Entomology* (no. 737) Series B *Review of Medical and Veterinary Mycology* (no. 739); *Zentralblatt für Bakteriologie Abt I Referate* (no. 743) *Zoologischer Bericht* (no 1961)

SEE ALSO abstract, review or bibliographic sections of *Cahier de médecine vétérinaire Encyclopédie vétérinaire périodique Zentralblatt fur Bakteriologie Parasitenkunde und Infektions-krankheiten Abt II*

Reviews

1930
Advances in Veterinary Science. New York, 1 1953+
Review progress and newer knowledge

Biographies

1931
American Veterinary Medical Association Directory 16 ed Chicago The Association, 1954 [illegible]p
Lists veterinary associations and colleges Digest of veterinary practice acts. Geographic directory of veterinarians by state, with information on training Includes Canada and some foreign countries. Revised frequently

1932
Royal College of Veterinary Surgeons The register of veterinary surgeons and the supplementary veterinary register 1953 London The College, 1953 45[illegible]p
Alphabetic and geographic membership lists, college and school lists with faculty government grades with names of officials, research institutions, and honors and prizes. Annual first published in 1848.

Histories

1933
Leclainche, Emmanuel. Histoire de la médecine vétérinaire. Toulouse: Office du Livre, 1936. 812p.
Detailed history without index.

1934
Merillat, Louis A., and Campbell, Delwin M. Veterinary military history of the United States. Chicago: Veterinary Magazine Corp 1935 2
Detailed study with list of army veterinarians, 1866–1935 with dates of appointment and discharge.

1935
Smith, Sir Frederick. "The early history of veterinary literature and its British development. V 1 in *Journal of Comparative Pathology and Therapeutics* 26–31 (1913–18); 2–3 reprinted from *Veterinary Journal* suppl. (1923–24 1929–30) 4 London Baillière, Tindall & Cox, 1933.
Comprehensive history

1936
—— A history of the Royal Army Veterinary Corps, 1796–1919 London Baillière, Tindall & Cox, 1927 268p.
Short history

Encyclopedias, guides, handbooks

1937
Hutyra Franz, Marek, Joseph, and Manninger Rodolph. Special pathology and therapeutics of the diseases of domestic animals. 5 English edition, ed. by J Russell Greig [et al] Chicago Eger 1946. 3v
One of the best scientific work on veterinary medicine. Translation of Hutyra and Marek, *Spezielle Pathologie und Therapie der Haustiere*

1938
Joest, Ernst, ed. Handbuch der speziellen pathologischen Anatomie der Haustiere. 2. Aufl Berlin Schoetz, 1926+
Exhaustive scientific work on morbid anatomy of the domestic animals. The first volume was edited by Joest, the second by Walter F et The first edition in 5 The second edition is not yet complete (v 2 dated 1936–37)

1939
Wooldridge, George H ed. Encyclopaedia of veterinary medicine, surgery and obstet-

rea. 2. ed. London Oxford Univ Pr 1934. 2v

Practical treatise on diseases of animals. Classified arrangement. Out of print. New edition in preparation.

VIRUSES

see Bacteriology mycology parasitology viruses.

WOMEN IN MEDICINE

Biographies

1948

Directory of medical women, comp. by Bessie Grigg. [Ed. by Elizabeth Mason-Hohl.] 2. ed. Newport, Ky.: Elizabeth Pr 1949 303p.

Issued by the *Medical Women's Journal.* Arranged by state. Includes Canada and Latin America.

Histories

1941

Hughes, Muriel J Women healers in medieval life and literature. New York. King Crown Pr 1943. 180p.

Excellent study with lengthy bibliography nd many footnotes.

1942

Lipinska, Mélanie. Histoire des femmes médecins. Paris Jacques, 1900. 586p. (Thesis.)

Detailed history with bibliography

1943

Mead, Kate C. H. A history of women in medicine. Haddam, Conn.: Haddam Pr 1938. 569p.

Detailed though uncritical study through the eighteenth century; well illustrated.

1944

Schönfeld, Walther Frauen in der abendländischen Heilkunde vom klassischen Alter tum bis zum Ausgang des 19 Jahrhunderts. Stuttgart: Enke, 1947 176p.

Brief sketch with biographic notes and bibliography

WRITING AND PREPARATION OF MANUSCRIPTS

Encyclopedias g ides handbooks

1945

Bredow Miriam. Handbook for the medical secretary 2 ed. New York: McGraw-Hill, 1945. 359p.

An excellent and comprehensive work for the attenda t in doctor's office.

1946

Crowe, Mildred R. An Introduction to the preparation and writing of articles for medical journals, *J fferson Hillman Hospital Bulletin Medical College of Alabama, 4* (April, 1950) 60–98.

Practical and concise suggestions.

1947 * *

Fishbein, Morris. Medical writing: the technic nd the art. 2. ed. Philadelphia: Blakiston, 1950. 292p.

Assisted by Jewel F Whelan. Detailed directions for writing and preparation of manuscripts for publication. Includes list of journals with abbreviations used in the *Quarterly Cumulative Index Medicus.*

1948

Gibbs, Helen M. The research or technical report; manual of style and procedure. San Francisco Gibson, 1950. 131p.

A handbook, not textbook. Reading list.

1949

Gill, Robert S. The author-publisher-printer complex. 2. ed. Baltimore: Williams & Wilkins, 1949 144p.

Chiefly concerns the preparation of the manuscript for the printer and business relations between scientific author and publisher

1950 *

Jordan, Edwin P and Shepard, Willard C. B for medical writing; useful guide to principles and practice of effective scientific riting and illustration. Philadelphia: Saunders, 1952. 112p.

More concise than Fishbein, omitting material on composition, grammar and style which is easily found elsewhere. References. N list of journals.

1951

Mayo Clinic. A handbook for Clinic authors; sketch of policy and procedure. Rochester Minn.: [The Clinic] 1950. 27p.

Clear and concise suggestions useful, in part, to any author

1952

Royal Society of London. Information Services Committee. General notes on the preparation of scientific papers. [Rev ed.] London Cambridge Univ Pr 1950. 26p

T be used with specific instructions of societies and other publishing bodies. Useful list of books for reference. Important note on the preparation of author' summaries.

1953 ★
Trelease, Samuel F. The scientific paper: how to prepare it, how to write it; a handbook for students and research workers in all branches of science. 2. ed. Baltimore: *Williams & Wilkins*, 1951. 163p.
Guide to preparation of papers; especially good for charts and graphs.

YELLOW FEVER

Histories

1954
Carter, Henry R. Yellow fever: an epidemiological and historical study of its place of origin. Ed. by L. A. Carter and W. H. Frost. Baltimore: Williams & Wilkins, 1931. 308p.
Detailed and comprehensive, with bibliography.

Encyclopedias guides handbooks

1955
Strode, George K., ed. Yellow fever. New York: McGraw-Hill, 1951. 710p.
Extensive treatise. Includes work of Rockefeller Foundation, International Health Division. Bibliography.

ZOOLOGY

SEE ALSO Biology

Bibliographies, indexes, abstracts

Selection here has been based either on the indirect application of these tools to the medical sciences or on the fact that they constitute general bibliographic works from which the medical scientist can select material of interest. More comprehensive bibliographies can be found in Winchell's *Guide* and comparable publications.

1956
Apstein, Carl H., and Waslkowski, K. Periodica zoologica: Abkürzungsverzeichnis der wichtigsten Zeitschriften-Titel aus dem Gebiet der Zoologie und ihrer Grenzgebiete. Leipzig: Akad. Verlagsges., 1938. 82p.
Nearly 3,000 titles.

1957
Hassall, Albert, Doss, Mildred A., et al. Index-Catalogue of medical and veterinary zoology. [Authors, A-Z.] Rev. ed. Washington: Govt. Print. Off., 1932-52. 18 pt. Suppl. 1 Authors A-B, 1953+.
A revision and continuation of the first edition by Stiles and Hassall which is superseded. Published by the U.S. Department of Agriculture, Bureau of Animal Industry Zoological Division. A fine bibliography based chiefly on the card catalogs of the Bureau of Animal Industry. It constitutes an author index to the subject catalog published in the *United States Hygienic Laboratory Bulletin* as follows: "Trematoda and trematode diseases," in *Bulletin* no. 37, 1908; "Cestoda and Cestodaria," in *Bulletin* no. 85, 1912; "Roundworms . . ." in *Bulletin* no. 114, 1920; and to subsequent literature up to dates of publication of each issue. No published subject index. This *Index-Catalogue* is more comprehensive for worms than for other groups, e.g., protozoa, poisonous insects, and snakes. Symbols indicate in what library a given reference can be found. This index is discussed by Mildred Doss, "The Index-Catalogue of Medical and Veterinary Zoology," *Bull. med. Libr. Ass.*, 41 (April, 1953), 110-13.

1958
Smith, Roger C. Guide to the literature of the zoological sciences. [Rev. ed.] Minneapolis: Burgess Pub. Co., [1952]. 133p.
The chapter on the library includes information on important foreign libraries and, in more detail, on those of the United States. Systems of classification discussed. Annotated bibliographies. Chapter on the preparation of scientific articles. Useful to the graduate student and librarian.

1959
Zentralblatt für Zoologie, allgemeine und experimentelle Biologie. Leipzig and Berlin, 1-6, 1912-18.
Formed by union of Zentralblatt für allgemeine und experimentelle Biologie and *Zoologisches Zentralblatt*. Classified abstracts. Material is chiefly in German and English. No subject index, only table of contents.

1960
Zoological Record. London, 1, 1864+.
Published by the Zoological Society of London. V. 1-6 as *Record of Zoological Literature*. 43-52, covering the literature for 1906-15, issued as Section N of *International Catalogue* (no. 6). A comprehensive, annual, classified index. No author index.

1961
Zoologischer Bericht. Jena, v.1-55, 1922-43/44.
Published by the Deutsche Zoologische Gesellschaft. Good abstract journal. Also useful for veterinary medicine.

1962
Zoologischer Jahresbericht. Leipzig, v.1–35, 1879–1913 (published 1880–1924)

Compiled by the Stazione Zoologica, Naples. This began as a bibliography and evolved into a review journal. Index, 1879–1910.

SEE ALSO *Agricultural Index* (no. 792); *Année biologique* (no. 766) *Berichte über die wissenschaftliche Biologie* (no. 767); *Bibliographia eugenica* (no. 1053); *Biological Abstracts* (no. 768e and f) *International Catalogue of Scientific Literature* (no. 6) Section N; *Zentralblatt für Bakteriologie Abt. I Referate* (no. 43)

SEE ALSO abstract, review or bibliographic sections of *Anatomischer Anzeiger Journal of Mammalogy*

Reviews

1963
Ergebnisse und Fortschritte der Zoologie. Jena, v.1–8, 1907–35.

Review articles. Classified arrangement. No subject index. Continued in part as no. 1964.

1964
Fortschritte der Zoologie. N.F. Jena, v.1 1935+

Continuation of part of no. 1963. Annual through v.7 1941; v.8 covers 1942–44; v.9 1945–50. Published about two years late. Review articles. Classified arrangement. No subject index.

SEE ALSO *Review of Applied Entomology* (no. 737); *Helminthological Abstracts* (no. 732); *Veterinary Bulletin* (no. 1929)

Histories

1965
Hall, Thomas S., ed. A source book in animal biology. New York, McGraw-Hill, 1951. 716p.

Translated excerpts of contributions to animal life, behavior, development, cellular biology and pathology; also zoogeography. From Leonardo da Vinci to present day.

Dictionaries

SEE Eycleshymer (no. 677); Jaeger (no. 783); Melander (no. 784); Swart (no. 536)

Index

Numbers in boldface refer to the numbered items in the Bibliography pages 349–537

Index